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A

TREATISE

ON THE

DISEASES OF FEMALES,

BY

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WITH ILLUSTRATIONS.

Tenth Edition,

WITH THE AUTHOR'S LAST IMPROVEMENTS AND CORRECTIONS.

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Eastern District of Pennsylvania to wit:—

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N. CHAPMAN, M.D.,

PROFESSOR OF INSTITUTES AND PRACTICE OF PHYSIC, ETC., ETC.,

This Work is inscribed,

WITH SENTIMENTS OF THE HIGHEST ESTEEM, FOR HIS MANY VIRTUES,
AND THE SINCEREST ADMIRATION OF HIS VARIOUS TALENTS,

BY HIS OBLIGED FRIEND,

THE AUTHOR.

AUTHOR'S

ADVERTISEMENT.

THE following pages are presented to the public without preface or apology. The necessity of a work on the Diseases of Females, and especially the most common of them, seems to be pretty generally acknowledged; but the difficulty of executing it can only be known to him who undertakes it. This will plead with the liberal for moderation in criticism; though it may be no extenuation with those of a contrary feeling. From the observations of the former we hope to profit, should any such honour the work with their notice; and from the latter we will not flinch, however severe the castigation, as we know it is much easier to find fault than to excel.

THE present edition of this valuable work contains the revisions and additions of the author, made by him a short time previous to his death.

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ON

THE DISEASES OF FEMALES.

CHAPTER I.

OF THE PECULIARITIES OF THE FEMALE SYSTEM.

However powerful the influence of education and modes of life may be upon the human frame, they are not capable of effecting so great a change upon the female constitution, as to deprive it of its distinctive peculiarities. Yet we are aware that much is done by these great agents; and that when they have been employed under equal circumstances, for an equal period, an approximation of physical and moral similarity has been observed; though they have never been able to alter the general character of the female so much, as to leave the slightest doubt to which of the sexes the individual belongs, even independently of sexual peculiarity.

The intentions of nature in the formation of man, are not, and cannot be fulfilled, by one sex alone; both must concur in this great object; and it would be idle to decide, by any process of reasoning, to which is assigned the most important rôle in this great work. Participation is essential to the end in view; and to each is allotted respective duties; duties which cannot be exchanged or even varied; for they are immutable. To preserve, therefore, the moral and physical distinctions in his favourite creatures, and to prevent either neglect or confusion in the performance of the duties assigned to them, the Deity has imposed such distinctness of organization upon the sexes, as defies alienation, or exchange in the exercise of the functions resulting from it.[1]

[1] Alphore le Roi is of opinion, that most of the causes which degenerate the human family, originate with the female. He says, "With a view more effectually

In this place, however, we have only to detail, and that very briefly, the peculiarities which distinguish the female from the male; peculiarities which impose upon her functions and diseases altogether her own. For both her particular organization and her temperament are made subservient to the important part she is destined to perform; upon her devolves conception, gestation, delivery, suckling, and all the contingencies connected with these processes.

To what evils, then, do not these processes subject the female! yet, before she experiences them, she is liable to all such as may arise from sexual functions and organization: and before she can perform one of the ultimate intentions of her creation, she is obnoxious from mere structure to painful, and sometimes to fatal diseases.

For to her the period of puberty is oftentimes replete with evils; she is constantly liable to irregularities in her menstrua, and menaced severely by their consequences. She may be visited by them precociously, and be debilitated by their quantity or frequency; or they may be withheld so long, as to involve her health in ruin. Or she may be defective or exuberant in structure; and be obliged to submit, if not to dangerous, yet perhaps to indelicate operations, to compensate for the one or for the removal of the other. Besides these, she is liable to all the diseases of the male, that do not depend upon sexual distinction: and thus is multiplied upon her almost all the evils that can befall two sexes.

The anatomical and physiological peculiarities of the female are both numerous and curious; we shall only, however, succinctly enumerate a few.

One of the most striking differences between the male and female, is the inferiority of her stature. Her whole osseous fabric is more delicate and less extended. The bones of her cranium are thinner, smaller, and more pliant; and the space destined to be filled with the brain, is smaller.

The chest is more elevated, in consequence of the ribs forming nearly right angles with the spine; and these bones themselves are broader and flatter than in the male. This disposition of the ribs renders the thorax shorter, though its upper part is larger; but the sternum and cartilages have less length, and are flatter; the clavicles are longer and less crooked. The pelvis of the female differs in a number of points from that of the male; it is

to follow the labyrinth of the human economy, it appears necessary to study that of the female; in this we may perceive more certainly and frequently than in that of the man, the cause and progress of diseases. Moreover, the degeneration of the species always begins in nature with the female; to study the diseases of them is to arrive at the source of all that belong to the human species." Histoire Naturelle de la Grossesse et l'Accouchement, p. viii.

calculated to subserve one of the most important as well as interesting functions of the body; namely, the passage of the child during labour: hence, we find all its diameters larger than those of the male; together with a much greater expansion of the bones which constitute the arch of the pubes, &c.

The general characters of the bones, as well as their connexions with each other, differ from those of the male; their angles are less silent; and consequently their articulations are better concealed.

The muscular system also differs; its mobility is much greater; the whole of the fibres of the female seem to possess a greater tenuity and sensibility; hence, the proneness of the female to spasmodic and convulsive diseases; hence, the greater susceptibility of impressions from physical and moral causes: hence, the greater quickness of contraction of the muscles; and hence, less permanency of impressions.

The nervous system has also its peculiar properties; the nerves themselves are smaller, and of more delicate structure. They are endowed with greater sensibility, and of course are liable to more frequent and stronger impressions from external agents, or moral influences; and thus the nervous, with the muscular system, contribute to render the female liable to spasmodic diseases, and obnoxious to inordinate stimulation.

But these peculiarities are considered by some, rather an advantage, than an evil. Thus Vigarous declares, "Cette sensibilité excessive, loin d'être un mal, devient un avantage dans leur condition; car plus les sensations sont grandes, moins elles sont durable, parce que la mollesse et la flaccidité des solids leur faisant opposer moins de résistance, leur réaction est moins forte et cesse bientôt."

"Ill n'en est pas de même dans l'homme; la rigidité et la force de ses solides exigent plus d'energie et un plus grand degré d'entensité dans la cause qui agit sur lui; mais aussi l'effect est plus durable, par la grand résistance que sont en état d'opposer ses organs, resistance qui le fait souvent succomber. Je comparerois volentiers, dans ce cas, la femme à ce frêle roseau, qui, incapable de resistance, fléchit humblement la tête sous l'effort de la tempête, et la relève doucement quand le calme est revenue; et l'homme à ce chêne altier, qui se trouve abuttu, par la seule raison qu'il est fort et capable de resister."[1]

In the sanguiferous system, we may perhaps recognise the united peculiarities of the muscular and nervous systems; for in that system we constantly find the circulation carried on with more rapidity, but with less force; the arteries are smaller, more irritable, and more easily urged into action, and less easily ap-

[1] Maladies des Femmes. Vol. i. p. 10.

peased, after having been inordinately excited. The veins offer less resistance to any given distending force; hence, they are more strongly marked upon the surface of the body; more decidedly full, or permanently distended; and more disposed to become varicose. The arteries have smaller calibers; are quicker in their action; and but rarely ossify.

The cellular system is more abundant; more flexible; and more easily distended. It is better supplied with moisture; and from the compressibility of its texture, permits the blood vessels to divaricate, and pass unrestrainedly in all directions through it. From its abundance, and especially about the articulations of the great joints, and large foldings of the body, a roundness and beauty is given to parts, which in the male are angular, and perhaps even sometimes unsightly.

The cutaneous system differs much from that of the male; for it, of itself, almost becomes an object of beauty. Its texture is infinitely finer, more highly polished, and more decidedly transparent. It permits the veins to ramify gracefully through its structure; to be distinctly seen, and thus forming a fine contrast with the white ground on which they repose. It shows, from its fineness, to the greatest possible advantage, the arterial terminations which so beautifully assemble upon the cheeks. Its sensibility is much greater; and its sympathies, if not more extensive, are certainly more vivid, than in the male. It is also much more distensible; especially that portion of it which covers the abdomen; and makes, by this means, an important provision for the period of gestation. The capillary system, also appears to be more developed in the female than in the male system. Thus the great aptitude of the system of the former, to diseases attended with paleness of the skin, œdema, dropsy, and hemorrhages, and thus involving affections of both the serous and the mucous surfaces.

The lymphatic system of the female does not differ widely, as regards conformation, from that system in the male: it absorbs and transmits, perhaps, with more rapidity, its appropriate fluids; yet, there is no other known peculiarity in it, except the lymphatic vessels are more numerous; and when they have a certain predominance, they constitute a temperament; and then, unfortunately for the possessor, it but too certainly and too frequently, becomes the seat of terrible, and oftentimes incurable disease.

The peculiarities which we have thus briefly pointed out necessarily render the female constitution one of a marked and distinct character. The assemblage of the differences which constitute it, renders it, in general terms, one in which the solids are less dense and resisting: for these are found to be more relaxed and flabby than in the male, owing, probably, to the predominance of the cellular and nervous systems. The lymphatic system is

more extensive than the sanguineous; which, it is supposed, gives to the female a greater quantity of fluids than to the male.

To the operation of several of the peculiarities above enumerated, is attributed the supposed predominant temperament of the female constitution; namely, the sanguineous temperament, so much insisted on by Rousel, and agreed to by Vigarous.

In attributing the sanguineous temperament as the predominant one of the female, we only mean to express it as occurring as a general rule; for we are aware that there are many exceptions to be found; for, among them, as with the male, every temperament may be seen. It has, however, been given so generally, that some object must attach to its frequency; and perhaps the opinion of Vigarous is as plausible as any. He says, "Destinées, comme elles le sont (females) â passer de révolutions en révolutions, à eprouver des transitions brusques dans leur maiére d'être, la nature a dû former les femmes d'une trempe molle, pour les mettre en etat de résister aux orages auxquels elle sont exposées," p. 39, vol. i.

Besides the system just enumerated as belonging to the human system, many are disposed to give to the female another, namely, the *uterine system;* and which they endow with an extent of influence that belongs to no other.

It has been handed down to us from time immemorial, that the uterus exerts a paramount power over every other system; and governs them with a sway no less whimsical than potent. That it creates, exalts, or modifies disease, in every portion of the body; hence, the aphorism of Hippocrates, "morborum omnium qui muliebres vocantur uteri in causâ sint." That it not only forms, or governs the moral character of the female, but regulates the physical movements of her body: hence, the declaration of Van Helmont: "propter solum uterum, est mulier id quod est."

By many, the uterus has been declared to possess a separate and peculiar life; that it has its own mode of existence; and is totally independent of the laws which govern the other portions of the system. Aretæus compared it to "an animal confined within another animal; that it travelled without restraint from any portion of the body to another; that it would take possession of any sense; or occupy any viscera, whether situated at the right or the left side of the body; but that its movements were rather towards the inferior portions of it. It was like a wandering being; that it relished agreeable odours, and would move itself towards the place from which they appeared to emanate; but would remove itself, in sadness, from places which had disagreeable smells," &c.[1]

Sydenham, Cullen, Good, and very many others, have given

[1] Chambon.

to this organ power to produce or modify disease. To venture an opinion, that would very much differ from the sentiments of the great men just named, would have the appearance of fastidiousness at least, if not of rashness. But, as we have never witnessed any decided instance of this exclusive influence of the uterus in the production or modification of disease, we feel ourselves justified in entering our protest against its possessing such unlimited sway. In doing this, however, let us make ourselves as clearly understood as the nature of the thing will permit.

First.—We have ever found the unoccupied uterus to be one of great passiveness when in a state of perfect health; and that so long as it preserved this condition, it manifested no agency in the *production* of disease, or in *modifying* it, when present. Thus, fever, inflammation, either local or general, or spasm, has never appeared to us to derive advantage, or suffer inconvenience, from the influence of this organ.

Second.—That when in a state of disease, we have found several parts of the body sympathize with the uterus: as the stomach, the head, the breast, &c.; but precisely the same thing may be said of other parts of the body; yet for neither of these is such influence claimed, as is bestowed upon the uterus. Thus the brain, the stomach, the kidneys, the liver, &c., when in a diseased state, will have particular parts deranged by a sympathetic influence; yet it has never been asserted, that either of these parts had, at any other time, or under any other circumstance but disease, an agency in producing or modifying the affections of other portions of the body.

Third.—While the uterus is performing one of its functional duties, namely, forming the menstrual fluid; when it is known to be in a state of excitement, and decidedly engorged with blood; a time when it would most likely exert an influence, if it really possessed any, we never find this organ exerting a power over other parts, so long as the functional process is carried on healthily; and during this period, we have hitherto not been able to detect the slightest influence over any disease, that may have been present in the system; nor has it ever made us vary a prescription, or modify a treatment.

Fourth.—That when the menstruous function is performed with pain and difficulty, other portions of the system are found to suffer from sympathy; but in no greater degree than these very parts have been known to suffer, when some other organ was the seat of irritation. In dysmenorrhœa, we have known the back and stomach suffer severely, the first from pretty intense pain, and the second by severe vomiting; but we have seen the same consequences attend an irritated kidney, or an inflamed neck of the bladder.

Fifth.—That when this organ is labouring under severe dis-

case, as inflammation, scirrhus, or cancer, where all its ordinary functions are either deranged, perverted, or suspended, and this for a long period together, we do not find, that it involves the system in any severer penalties than any other equally important viscus would, under similar circumstances.

Sixth.—That when its functional processes are irregularly and imperfectly performed; or are altogether suspended; if the general health suffer from this cause, it is not because the uterus has any superior power to effect this, but because a link is broken (and we are willing to admit it to be an important link,) whereby the chain of healthy functions is maintained. A similar condition of any of the other viscera would be followed by the same consequences.

Seventh.—That when the uterus is impregnated, various other portions of the system are deranged, in consequence of their strong sympathy with this organ; but even here, the complaints are not sui generis; for every one of them can be, and have been, very often similated from other causes.[1] The whole phenomena of impregnation are so well understood as not to require reciting; but has not almost every body witnessed the whole train of these morbid sympathies to arise from very different causes?

We would then ask, what evidence is there, that the uterus possesses such unlimited sway over the healthy or diseased movements of almost every other portion of the body? Does not this error proceed from the influence of authority, and a supineness and indifference to rational inquiry or correct observation? Should the names of Hippocrates, Galen, Aretæus, Van Helmont, and a hundred others of greater or less authority, be permitted so to satisfy the judgment, or so paralyze exertion, as to prevent all investigation?

The discoveries of Gall and Spurzheim on the influence of the cerebral system upon other portions of the body, render it much more probable, that the various morbid phenomena attributed to the influence of the uterus, depend upon certain excitements in the cerebellum; and that the several facts recorded as belonging to the genital system of the female, are themselves but evidences of the influence of cerebral irritation. In the male, at least, this point is pretty well settled—as it has been found by Larrey and others, that certain wounds or injuries of the cerebellum, entail impotence. It is, therefore, much more rational to look for some

[1] In this assertion, we do not mean to include that beautiful and magic-like play of sympathies, which is established for the future welfare of the expected being; namely, the swelling of the mammæ, and the secretion of milk. These parts have a mutual, and an associated sympathy, which they with great fidelity maintain as long as they are capable of performing their appropriate functions. The nature and extent of these intercommunions are too well known to need a particular mention.

disturbance of the brain or nervous system, as long since suggested by Willis, for the origin of hysteria, &c., than to any direct influence of the uterine system.

Do not let it be understood, from what we have just said, that we undervalue the importance of the uterus as an organ; for as an organ we are free to admit that it has high destinies to fulfil; we only wish to insist that it has no exclusive, or concurrent power, to produce, modify, exalt, or diminish, any disease or affection of the body, beyond several other viscera; and, perhaps, less than some. The stomach, decidedly, and, perhaps, the liver, have a more marked influence, either in a state of health, or of disease, over the animal economy, than the uterus.

Nor are we to be supposed to countenance the opinions advanced by Mr. Fogo,[1] some few years since, in a paper entitled, "On the degree of importance which should be attached to the functions of the uterus, in regard to health." He declares it as his opinion, that the uterus is of so little consequence to the animal economy, that it might be spared from the body, without the system suffering by its removal. He calls it "a simple, passive, accommodating organ; and, on this account, can have but little influence or control upon the functions of the body." If the value of an organ be tested by such estimates, to what a low value would the brain or the stomach be reduced?

The stomach may, especially, be called "a simple, passive, accommodating organ;" possessing, perhaps, in a greater degree, these qualities, than even the uterus itself. In the first place, its structure is less complicated than the uterus; it is equally passive, when permitted to be so; and it is doubtless as "accommodating;" as the efforts of the gourmand have frequently proved. Yet Mr. Fogo, himself, would not hesitate to admit, that this "simple, passive, accommodating organ," cannot well be spared, because it possesses these qualities.

In a word, we are of opinion, that the uterus ranks in the first order of the viscera; that its health is every way important to the general health of the system; but that it does not exert any particular power over other portions of the body, more than any other important viscus would, under the same circumstances; namely, of disease. That its influence is greatest, while performing, or giving evidence of its best state of health; namely, during gestation.

[1] See an answer to Mr. Fogo's paper, in "Essays connected with Midwifery," by William P. Dewees, M. D., &c.

CHAPTER II.

OF THE DISEASES OF THE EXTERNAL AND INTERNAL ORGANS.

THE structure of the external organs is such as to render them liable to a variety of complaints that always excite alarm, however free they may be from danger. Indeed, any disease of these parts creates a great deal of apprehension, especially in the married, or the pregnant woman. Women, especially the married, are often kept in a state of great anxiety, when labouring under any affection of these parts, until they can be assured it is not one of a *particular kind*, and that it will not be attended with danger. On this account, it is of consequence to the young practitioner, that he be acquainted with their general diseases, both in the unimpregnated and in the impregnated state of the uterus.

It may be observed, as a general rule, with respect to the economy of these parts, that, from their great vascularity and sensibility, inflammation runs on very rapidly to suppuration, and is accompanied with much pain. Indeed, we have seen severe inflammation of the labia terminate very rapidly in gangrene, though much exertion had been made to prevent it. It may, also, be observed, that suppuration of the labia is attended with more than a usual degree of fetor; owing, most probably, to their very cellular structure; this tissue is found to die more easily when much accumulated, than when in more spare proportions. We may also add, that parts thus organized granulate more slowly after suppuration, than many other portions of the body, from the same cause.

From the looseness of the texture of some of these parts, especially the nymphæ and labia, they become sometimes very much enlarged, from very slight irritation; and when there has been a neglect of proper cleanliness, the natural secretions become acrid from stagnation, and produce itching, which, though slight at first, very much increases by the indulgence of scratching; and if this be persisted in the parts become inflamed, and sometimes swell inordinately, but does no mischief ordinarily, if not too long persevered in. This happens especially with those who have a dread of water after the catamenial discharge; and who neglect to wash themselves after these purgations. On this account it, is important that the parts should be daily washed with warm water, particularly during the flow, and immediately after the menses have ceased; or if the woman be subject to fluor albus.

The prejudice of some women on the subject of washing, should be removed, by the practitioner making it a point to recommend its frequent use, when consulted on these diseases.

Sect. I.—*Of Tumours and Excrescences of the External Parts.*

Some parts of the external organs are more liable to tumours and excrescences than others; thus, the labia and nymphæ are more frequently the seats of these affections than other portions of the vestibulum. The nymphæ appear more obnoxious to indurations and excrescences, than even the labia; and they are especially so, when they are sufficiently long to protrude beyond the labia.

Sect. II.—*Diseases of the Nymphæ.*

When these bodies become much enlarged, they present a very *dark colour*,[1] are dense, and sometimes studded with a number of little tumours resembling warts.[2] From their position, they are constantly liable to irritation; and in cold weather, to excoriation. Sometimes violent inflammation seizes upon these parts in consequence of the reaction which follows a great reduction of temperature.

In such cases rest should be enjoined; a free purging instituted; and if the arterial system become involved, blood should be taken from the arm; or from near the part, by leeching. A soft bread and milk poultice should be applied to the part, and renewed as frequently as occasion may require; that is, in warm weather, every three or four hours; in cool or cold weather, more seldom.

These parts, from the intensity of the inflammation, (especially if they have been much irritated by scratching,) sometimes run on to suppuration. When this takes place, they must be treated as any other suppurating surface; taking care that the labia are not permitted to coalesce during the healing. We once saw an instance of the nymphæ suppurating, and by this means getting rid of a number of warty excrescences, with which they had been studded.

Should these excrescences attend or follow a venereal affection, it might be well, in some instances where the disease is obstinate, to try the effect of mercury; but this remedy holds out but little prospect of success, unless there be present an unsub-

[1] Mr. Burns says white; but this we have never seen.

[2] Dugès says he has seen them from the size of a pea to that of a turkey's egg. We have never seen any so large as the latter.

dued venereal taint. When they are in the form of warts, and these very numerous, as is the case very often, nothing will succeed so well as keeping the parts very dry, and exposed as much as possible to the air. The following case will illustrate this practice sufficiently.

Mrs. —— had been severely injured by her husband giving her the venereal disease in its most aggravated form; namely, chancres and buboes. About six months after she appeared to have recovered from these affections, she found a vast number of little tumours spread over the labia, the nymphæ, and other portions of the vulva, which increased rapidly in number as well as augmented in size; from the whole surface of which there issued a disagreeable smelling matter which excited itching; and when the parts were rubbed, blood would follow.

The gentleman who had attended this patient for the venereal complaint, was called on again on account of the warts; he prescribed mercury to salivation: this was complied with; but the little warty tumours increased to such an extent, that a severe bleeding would follow every attempt at conjugal enjoyment. We were now consulted. The whole vulva was found to be completely occupied by these warty productions; and were almost without number, and of great variety of sizes. As we had treated these productions in the male with success by exposing them to the air and keeping them perfectly dry, it was agreed, that our patient should follow this plan.

The patient was ordered to bed, and the labia were kept separate, by means of adhesive plaster: this being done, the whole vestibulum, and crop of warts, were exposed. A quantity of prepared chalk was dusted upon the surface, and no other application was permitted if we except the occasional washings with warm water, to remove the incrusted chalk; that is, morning and evening. This plan, though a little difficult of accomplishment, succeeded in about a fortnight to remove every excrescence, so as not to leave a vestige behind.

It was truly remarkable to see with what rapidity these parasitic productions lost their lives, by depriving them of moisture. They would drop off in large portions at every bathing of the parts, until all perished in turn.

Besides the excrescences just noticed, these parts are subject to prodigious enlargements; and sometimes require the knife for their removal. There is a preparation of this kind in the Museum of the Medical College of Pennsylvania, of an enormous size, and well worth the trouble of an examination.

The extirpation of these tumours is considered by all surgeons, we believe, to be perfectly safe. The operation never seems to expose any large vessels. And Dr. Denman informs us, he has seen the enlarged nymphæ and excrescences removed by the knife,

without the necessity of tying a single blood-vessel. Introd. Francis's ed. p. 100.

In certain parts of the world, the nymphæ are peculiarly liable to enlargement; in some instances they have measured several inches, as among the Bosjesman women, if the accounts of travellers are to be depended upon. On the shores of the Persian gulf, the Christian women of Abyssinia, and in parts of Egypt, the girls have these parts removed as a ceremony: it is intended to resemble circumcision.

Sect. III.—*Diseases of the Clitoris.*

The clitoris has occasionally been the seat of scirrhus, and of cancer, but when either of these seize the part, the cure is hopeless, unless the whole of the disease can be removed by an operation. In the Medical and Physical Journal, vol. v., p. 1, Mr. Simmons relates a case of enlarged clitoris, which he removed by excision, which measured in length nine inches; while the circumference of the stem measured five.[1]

It is the augmentation of this part, and especially when it assumes an equivocal form, that has given rise to the absurd opinion of hermaphrodites. It occurs most frequently in hot climates. We have seen a number of instances in new-born children, where this part, as well as the nymphæ, have stood entirely without the labia. Whether these parts increased in the same proportion as the body enlarged, we have never had an opportunity to ascertain.

The existence of the hermaphrodite has gained the assent of the greater part of mankind; so much so, that it would be difficult to disabuse them: we shall, therefore, not attempt it. To the physician, frequent appeals are made for his opinion on this subject, and he too often yields to the popular belief; but he should be informed, that, so far, no well-attested instance of this compound of sexes has ever been produced in the human subject. A resemblance in conformation does not prove identity of function; and, consequently, the general similarity of appearance, between the clitoris of the female and the penis of the male, however striking, does not prove them to be intended for the same

[1] "A clitoris was amputated some time ago in Mercer's Hospital, in this city. (Dublin) which, in volume, was about equal to the head of a child of two years old." Churchill's Diseases of Females, p. 25, Am. Ed.

Diseases of this part, from the gratification experienced by rubbing or scratching, have led, according to Mr. Churchill, to the establishment of Nymphomania, p. 17. The frequent mention of this complaint has induced me to the belief, that it is no uncommon occurrence in both Great Britain and France, but which is surely not the case in this country.

purposes. And it may be observed, that this similarity is more in the external form, than in the internal structure.

Nor do the instances in other mammaliæ, purporting to be of the same kind, afford the slightest support to this opinion. For, perhaps, every instance hitherto examined has proved to arise from a defect in the arrangement or organization of the sexual organs. Besides, in the higher classes of animals, it does not comport with the general analogy of nature, that one should possess the generative powers of both sexes.

Dr. Francis informs us, that "the latest decisions in juridical medicine, reject the possibility of both sexes in the same individual of the human species." [1]

Sect. IV.—*Of Adhesion of the Labia Pudendi of Children.*

The labia pudendi of young children are very often found adherent. This may be congenite; but we believe it to be very rarely so. We have seldom seen this condition of the parts, in children under six months old; and still more rarely, after the age of a year. From these facts, it would seem to be almost always adventitious, and owing principally to a want of cleanliness. Had the child been born with the labia in this condition, it is more than probable it would have been discovered early, as nurses, generally speaking, are at least curious, if not always careful.

When we consider the delicacy and vascularity of the membrane lining the internal face of the labia; the ease with which inflammation is provoked in parts so organized; when we recollect how quickly the secretions of the parts become acrid, where proper attention to cleanliness is not bestowed upon them; and how readily a slight inflammation may be increased by the flow of urine; we shall cease to wonder at the frequency of this complaint, and, perhaps, be even surprised that it does not occur oftener.

We have reason to believe, that in many instances, this complaint had existed some time before it was discovered: this may especially be the case with fat or lusty children, and where the most scrupulous attention is not constantly paid to the condition of these parts. Therefore it must be looked upon, in general, as arising from a reprehensible neglect; for it is the bounden duty of every mother, however averse she may be from the performance of it, to carefully inspect these parts from time to time; particularly until the child is fifteen or eighteen months old, in order that the

[1] Denman, p. 106.

inconvenience under consideration may not take place; or if it have, that it may be detected early.

Parents should direct, and the performance should be insisted on, that these parts be regularly cleansed every time the child is washed, by carefully separating the labia, and applying water liberally to them; they should then be tenderly dried with a soft linen cloth, and dusted with hair powder, or powdered starch, in which there is no blue. If this were regularly done in early infancy, the parts would become so hardened as to diminish the risk, very much, of its taking place after less attention is paid to them.

We have dwelt upon this subject, because we know its importance; and because it has not sufficiently attracted attention. Sometimes, unfortunately for the female, it has not been discovered during infancy; and it is especially unfortunate, when it remains concealed until womanhood; when, perhaps, the first intimation she may receive of her situation, is at a time, when of all others she would wish to have been ignorant of it. The alternative, now, subjects her to an operation, which should have been performed in early life.

This complaint sometimes becomes relieved, spontaneously.—This occurs, probably, more frequently than we are aware of; as the causes which may produce it are so constantly operating, as to lead us to suppose this accident to exist in cases where it has not been detected. We have had two instances of this spontaneous change to happen under our own observation.

In one of these, there was so much inflammation and tenderness in the parts, that we did not think it advisable to operate, until the existing state of things was changed. We directed soft bread and milk poultices, and a cathartic. On our next examination, we found that a complete separation had taken place, by the adhering parts having suppurated. Two raw surfaces were now exposed, which required much attention to prevent reunion in healing.

The other case was something similar: suppuration had commenced, and the connecting medium was nearly destroyed, when it was first observed. It was poulticed as in the other case; and when about to heal, care was taken to prevent a second coalescence.

This condition of the labia is easily detected by their refusing to be separated when the attempt is made for this purpose. For when the labia are separated by force as much as their condition will permit, a continuous line of union will be observed through their whole track; that is from the meatus urinarius posteriorly, and to the fourchette below; of course, the os externum is entirely concealed. The child passes its water with some little difficul-

ty; and when the complaint has been suffered to run on, or not discovered until womanhood, the menstruous fluid is evacuated through the same external aperture by which the urine is discharged.[1]

There is but one remedy, that we know of for this complaint —and that is dividing the parts. This is very easily performed, by passing a probe-pointed bistoury into the orifice immediately before the meatus urinarius, and cutting downward to the inferior junction of the labia. A small dossil of lint, moistened with sweet oil, may be insinuated between the separated portions. The wound heals, without the smallest difficulty, in two or three days.

Dr. Denman, however, gives another opinion upon this subject: he says, "In such cases, we have been directed to separate them (the labia) with a knife; and how far such an operation may be necessary in the adult, if the parts should cohere, either in consequence of some new affection, or if a cohesion, originating in infancy, should continue to adult age, must depend upon the judgment of the surgeon. But, in infants, such an operation is neither requisite nor proper; because, a separation may always be made, by a firm and somewhat distracting pressure upon each labium at the same time, which scarcely makes the child complain; though the small vessels, which had inosculated from one labium to the other, may be perceived to be dragged out during the continuance of the pressure. When a separation of the cohering labia has been made in the manner before mentioned, a folded piece of linen, moistened in a very weak solution of the zincum vitriolatum, or some slightly astringent liquor, should be applied every night when the child is put to rest, to prevent the reunion, to which there is a great disposition." Introduction to Midwifery, Francis's Edition, p. 101.

We cannot, from our own experience, give an opinion upon the success of Dr. Denman's mode of operating in adhesions of the labia. But his reputation as a man of skill and judgment, would justify any one in making the attempt he proposes; though we should, ourselves, not be induced to imitate it. The little pain, and the entire success which has followed the use of the knife in the numerous cases we have employed it, give our mind a strong bias in its favour. A preference for the mode recommended by Dr. D., can only arise from an ill-founded dread of the knife; it would, unquestionably, have required violent exertions to have torn some of the adhesions we have seen; and

[1] That is, there is no other outlet for the discharges from the uterus but that which the urine has preserved for itself; and by this often passing, it prevents the entire adhesion of the labia. But this does not constitute the "imperforate hymen."

much pain and inflammation, we think, would have followed such efforts.

Sect. V.—*Abscesses of the Labia.*

A variety of causes may excite inflammation in the labia; and, when once produced, it is always interrupted with difficulty; the vascular and cellular construction of these parts contributes much to hasten the suppurative stage. We do not remember a single instance in which a phlegmonous inflammation terminated by resolution, though in several instances, the chances were as fair for trial, (from the early application of the patient for relief,) as these cases generally are. Indeed, our failures to procure resolution have been so uniform, that of late years we do not attempt it; on the contrary, the immediate application of the ung. hydrarg. fort. sine tereb., or a warm bread and milk poultice, is always advised.

The progress of this inflammation to suppuration is usually so rapid, that but little time is permitted to make an attempt to procure resolution. The suppurative stage we have known to take place in a few hours; and it seldom continues beyond three or four days.[1]

This complaint is usually announced by a sense of heat, or rather of burning, in one of the labia, and if it be touched, even slightly, pain is felt. Pain is also experienced upon any motion which employs the lower extremities, and especially upon sitting down or crossing the legs. The internal face of the labium is found distended, very red, and protruding beyond the external covering of this part. It is from the great tenuity of this internal membrane, and, on this account, bearing distention so ill, that we may look for the little success that has followed either general and local bleeding, purging, low diet, or sedative applications, to prevent suppuration.

We have seen these abscesses in children, in several instances, follow bruises of these parts; they seem to be more painful in young subjects than in older; they are almost always accompanied, in children, as in older people, by fever; and require a strict antiphlogistic treatment. We have thought the application of the ung. hydrarg. fort. sine tereb., to be more useful than poultices, especially in young subjects; as it is always difficult to confine a poultice to the parts with sufficient exactness. One of the most painful and largest abscesses of this kind we remember to have seen, arose from a young lady sitting down suddenly

[1] "This disease may be distinguished from Hernia by greater firmness of the swelling, and its more circumscribed character. It is increased by coughing, and is not reducible." Churchill's Principal Diseases of Females, p. 2.

upon a hard pin-cushion; this case was treated exclusively with the ointment, until the moment the latter was discharged. They sometimes succeed to labour, and more frequently after a first child, than with the subsequent ones; unless some violence has been used to terminate the labour.

From the great delicacy of the membrane covering the internal face of the vulva, it is apt, when inflamed and much distended, to take on the erysipelatous form, and very quickly become vesicated; and if not soon relieved, will often slough. On this account, we have been in the habit, for some years, of exclusively employing the mercurial ointment for this species of inflammation.

Notwithstanding the rapidity with which matter generally forms, the inflammation is sometimes less active; requiring a number of days for it to pass through its stages. When this happens, the tumour feels like a moveable gland under the skin. But this lesser rapidity of march gives but little additional security against suppuration; for this will take place, though at a more remote period.

When pain is considerable, laudanum must be given; but, unfortunately, it does not always procure rest. These abscesses are not, however, in every instance attended by severe pain; we have known them discharge themselves with very little inconvenience to the patient.

It has been taught by many, that these abscesses should always be permitted to break spontaneously; but for what reason, we do not perceive. We have always pursued a contrary plan when we have had the opportunity; only taking care that the lancet is not prematurely employed. It, however, does not often require our interference; as the tumour opens of itself in a short time; but should it not, we do not hesitate to puncture it, if the suffering be great, and the fluctuation evident, for puncturing is all that is necessary, unless the most depending part of the tumour cannot be well commanded: in this case, it becomes sometimes necessary to lay it open to some distance, in order to secure a favourable healing.

Sect. VI.—*Œdematous Swelling of the Labia.*

It is not an unfrequent occurrence, especially with pregnant women, for the external parts to swell, or become œdematous. Women who have borne many children, and who labour under the anterior obliquity of the uterus, are more liable to this complaint, than those who are pregnant for the first time, or those who have not this obliquity. Women of leucophlegmatic habits,

who are much upon their feet, and who may be disposed to anasarca, are also more subject to this complaint than others.

It rarely happens, however, that this affection is confined to the labia: it sometimes pervades the whole of the lower extremities, to a very troublesome degree; nay, even to bursting.

This condition creates a great deal of alarm, and is looked upon as a genuine dropsy. Some have thought it promised an easy labour; we have never seen this connexion; on the contrary, when excessive, we have thought it rather retarded this operation, by interfering with the voluntary exertions of the woman, and the development of the external parts: and on this account it subjects the labia, and perhaps the perineum, to laceration. At least we witnessed a case of this kind, in which the laceration took place, though not very extensively. The midwife, who had charge of this case, said she could account for it in no other way; as from its thickness it would not yield. In this instance also, the labia suffered very much from giving way. There was much inflammation of the erysipelatous kind; and considerable sloughing followed, attended by a great discharge of ill-concocted pus, or rather of sanies.

This case has made me attentive to these swellings before labour is expected, whenever consulted for them. When it is purely a consequence of gestation, it will sometimes recede of itself, several days before pain shows itself; but this must not be relied upon always, since this change does not constantly take place. This condition of the labia is almost sure to be accompanied by a full, hard pulse, constipated bowels, and paucity of urine; notwithstanding that these swellings have their origin in a mechanical cause.

We have sometimes found great advantage from the loss of a few ounces of blood, a horizontal posture, and twenty grains of nitre, three or four times a day; taking care to keep the bowels soluble by the neutral salts in small doses. If it be evident, from the degree of swelling, that the cutis will give way if not relieved, it is best to take off the distention by puncturing such parts as are most in danger; when the labia are punctured, it should be upon their internal face.

Should it arise from a dropsical disposition in the general system, little can be done towards a cure, until after delivery: though it must be constantly proper to relieve the bursting skin by punctures, should labour even be begun. We have been obliged to do this in several instances, before the finger could be well introduced into the vagina; nor have we ever seen the least inconvenience follow the practice.

The woman should be directed to confine herself almost entirely to the bed, for the last week or ten days of her time; and

she must be put upon her guard, against a full and stimulating diet. Indeed, the less she eats, the better.

Sect. VII.—*Of Bloody Infiltrations in the Labia Pudendi.*

During labour a variety of accidents may occur to the parts concerned in this operation, among which, the one about to be noticed is not the least formidable in appearance, nor the least tedious in the cure. The disease to which I allude is the sudden and excessive distention of the labia pudendi, or only one of them, with blood, from some neighbouring vessel giving way, either during the progress, or very quickly after the delivery of the child; or, in some cases, immediately after the expulsion of the head.

This complaint is generally confined to one labium; I have never seen it otherwise, though cases are related where it has happened to both. Thus, Baudelocque mentions a case, on the authority of Solayres, where the labia were equally affected. This is certainly not usual; and perhaps may be accounted for from the peculiar nature of its cause; namely, a varicose condition of the veins of the labia and vagina.

This accident, in every instance in which I have witnessed it, has taken place after the delivery of the child, though not always immediately; but this is by no means constant; as we are informed by Drs. Maitland and Perfect, that the swelling occurred before the child was delivered. Dr. Maitland says, in his patient, he found a soft tumour covering the os externum, very much resembling the distended membranes, which proved to be the right labium pudendi distended to the enormous size of a child's head.

Dr. Burns is of opinion, that this swelling is owing to the rupture of a vessel within the nymphæ; but it is hardly probable that any vessel belonging to these parts would yield so suddenly such an enormous quantity of blood as is sometimes expended; for as much as five pounds have been discharged. In this case the patient died. In another instance, twenty ounces were evacuated, &c. See Burns, James's Ed., p. 60. I am of opinion, that the blood proceeds from vessels situated rather within the vagina; for those which compose the vaginal plexus, immediately behind the corpus spongiosum, are the most likely to suffer during the passage of the child's head, and to furnish this large quantity of blood.

And this opinion appears to be strengthened, by cases in which the accident happens before the delivery of the child; as the part just mentioned will suffer distention, before the head has entirely escaped through the os externum. Dr. Maitland accounts for

this case, by supposing, that, "from the pressure of the child's head, and the violent stretching of the parts during the labour pains, some of the small vessels had burst." Med. Comment., vol. vi., p. 89. Now it must be evident, that the nymphæ cannot be put upon the stretch while the head is confined within the pelvic cavity; and, perhaps, the hardness of the head may contribute to the occurrence of the accident, as I have not seen or found related, a case in which it took place, where any other part had presented.

The vessels which furnish the blood must be of considerable size; as the tumour which constitutes the disease is very suddenly formed, and is oftentimes enormous. The cases which I have witnessed, were all of this rapid kind; occupying but a few minutes for the formation of the tumour. Mr. Burns, however, declares, that "it has been known to advance so slowly, as not to attract attention for two days," p. 60. This may, doubtless, have happened, since the rapidity of the formation of the tumour must necessarily depend upon the size of the number of the vessels injured. In these slow cases, mentioned by Mr. Burns, it may have arisen from the rupture of a vessel in one of the nymphæ.

This complaint has been mistaken for the distended and protruding membranes, and for a hernia; but a careful examination of the deranged part will soon remove these errors. For it exhibits neither the position nor the colour presented in either of the cases with which it has been confounded. Its position is lateral, unless both labia are involved; in which case, the natural sulcus must be observable; and its colour is that of extreme lividity, or entirely black, which resembles neither the membranes nor hernia.

Owing to the unequal density of the external covering and internal face of the labium, it becomes irregularly distended; and scarcely any thing is seen but its excessively stretched, internal surface. So much so is this the case, that Dr. Maitland tells us, in the instance he witnessed, "the inside of the labium was turned so much outwards, that on the first application of the hand, the skin and hairs of the part were not felt."

The internal lining of the labium gives way sometimes from the excessive distention it has been made to suffer; this permits a quantity of fluid blood or a few coagula to escape, which tends very much to diminish the extreme anguish of the patient. In all instances of this kind, much pain is endured; and, in some cases, it has been so severe as to cause syncope: a case of this kind is related by Dr. Reeve, in the ninth volume of the London Medical Journal. Sometimes the tumour bursts before the child is born; Dr. Perfect relates a case of this kind; and the first case related below may be considered as a similar instance.

But, if this bursting does not take place, as sometimes happens when the size of the tumour is not enormous, the internal face of the labium is sure to yield in a short time, from gangrene taking place through its whole extent. This condition has been preceded, in two of the cases I have witnessed, by innumerable vesications containing a yellowish serum, spreading themselves over the whole surface of the tumour, formed by the stretching of the internal membrane of this part, but which, very soon after the swelling has acquired considerable size, yields, from the loss of life; and the patient in consequence feels considerable relief.

When the part sloughs, it exposes a large surface of coagulated blood, which quickly becomes decomposed, and yields a stench that is altogether intolerable.

Should the parts not give way, the pain arising from distention is unceasing and truly agonizing; fever of a very active kind is quickly kindled; delirium sometimes attends, and the woman's life becomes severely threatened. Her sufferings are also augmented by the retention of urine; as its passage is prevented by the tumour pressing firmly against the meatus externus of the urethra. The patient can lie only upon her back, with her knees drawn up, and the thighs widely separated. She cannot bear the pressure of the bed-clothes, nor the lightest applications; therefore it is in vain to offer relief, until the distended parts yield spontaneously, or are made to do so, by artificial means.

The severity of the patient's sufferings call for prompt and efficient relief: this must be administered by both general and local means. If fever attend, blood-letting must be employed to an extent that will ensure the reduction of arterial action; and be repeated pro re nata. With a view to give the earliest opportunity for the extravasated blood to escape, a free incision should be made the whole length of the tumour with a scalpel, or the shoulder of a lancet. I am not certain whether this plan has ever been insisted on by any writer, when the tumour preserves its integrity; but whether or not, I am convinced at the present moment it is the best mode of treatment.

Several advantages present themselves from making the incision just recommended: first, we may prevent sloughing, which is always desirable when these parts are concerned; secondly, the patient is quickly relieved from the excessive pain which constantly attends this complaint; thirdly, the extravasated and decomposing blood has a better opportunity to discharge itself, and consequently the progress of the cure hastened; fourthly, it will sooner allow of antiseptic applications, to correct the extreme fetor of the putrefying coagula.

The urine must be relieved as soon as the distention of the bladder becomes troublesome; this may generally be effected by pressing the enlarged labium gently to one side, and slightly ele-

vating it—should this not succeed, the catheter must be introduced pro re nata.

The bowels must be purged by any of the neutral salts; but the patient must not be permitted to rise during their operation; cloths must be placed under her to receive the fæces, as well as to catch the urine, when she is about to pass them. If she be permitted to get out of bed, it will create much unnecessary pain, besides incurring the risk of the renewal of the bleeding, by the rude and too sudden separation of a coagulum. The strictest antiphlogistic regimen should be observed. We are told of cases, where the bleeding has been considerable after the part has given way; to arrest which the wound was crammed with lint, and the vagina itself firmly plugged. I have never seen any bleeding follow the plan just suggested; nor do I see how it can well occur, without attempts have been made too early, and too rudely, to separate, or remove the impacted coagula. This must be carefully avoided; and their separation confined strictly to the powers of the system, unless it be the portions that separate themselves in consequence of the putrefaction of the blood itself, or by very gentle pressure. The detached coagula of course should always be removed, as often as they may separate.

It contributes greatly to the comfort of the patient, as well as being important to the cure, to keep the parts as clean as possible by frequent washing—for this purpose plain soap and water is as useful as any other mere detergent. The charcoal poultice is highly important, and should be constantly employed. The best mode of applying the poultice is to spread over its surface a piece of gauze or very thin muslin, that the charcoal may not adhere to the wound. Every loose portion of coagulum should be removed at each dressing, by carefully washing the part, as just directed; and the poultice should be changed every three or four hours, at farthest. The wound may be washed with a mixture of the pyroligneous acid and water; and the same acid may be profitably employed in its concentrated form over the poultice, by wetting folded linen with it.

Before the wound heals, the patient generally becomes considerably weakened from the excessive discharge of pus, &c. Her strength should be supported by a decoction of bark, the sulphate of quinine, elixir of vitriol, and a more generous diet, provided no febrile irritation remain. The following cases, (all I have witnessed,) will illustrate the routine of practice.

Case I.—1806, April 24th. I was called by Mrs. Rose, the elder, to Mrs. G., who was in labour with twins. At 1 o'clock, P. M., she was delivered of a female child. About ten minutes after its birth, the right labium pudendi became excessively swelled, which alarmed the midwife, and occasioned my being called. The part was found upon inspection by Mrs. R. to be

distended to its utmost bearing; extremely black; and nothing but the internal surface of the labium presented itself. Before I arrived, however, the tumour had burst, from the efforts made to expel the second child. When I examined the patient, there was little swelling remaining in the labium, but there was discovered a considerable opening from its superior portion to its insertion in the perineum. The second child was well situated; pelvis faulty; pains pretty frequent and severe; and great pain was experienced immediately above the pubes. In about fifteen minutes after my seeing the patient, the labium was again distended, and again it discharged itself: this took place four times before the birth of the child. This frequent bursting destroyed the connexion of the labia with each other so completely, as to leave nothing but the common skin at the perineum to support the pressure of the child's head when passing through the external parts; this proved insufficient to sustain the force with which it was urged against it, and an extensive laceration, even to the verge of the anus, took place, notwithstanding every precaution which a timely fear could suggest. She lost from the part, by this laceration, at least twelve ounces of blood.

25th. Complains of no soreness in the parts; the swelling nearly subsided; is feverish; some slight after-pains; passes no water; ordered a tea-spoonful of the sweet spirit of nitre, and a purgative enema.

26th. She passed water freely, after the sweet spirit of nitre and the enema. From this time but little inconvenience was experienced, except that which arose from the lacerated perineum. She was confined for some time to a horizontal posture, and at the end of the month was pretty well recovered.

This case differs very much from the two about to be related, first, in the blood being discharged from the tumour almost as soon as formed; secondly, in the integrity of the perineum being very much injured by the repeated yielding of the labial tumour, and in laceration being inevitable; thirdly, in the wound healing up in the labia without trouble, in consequence of its cellular structure retaining no coagula.

Case II.—1809, July 2nd. Mrs. A. was delivered, at 11 o'clock, A. M., of her second child, which was very large, after a severe labour of four hours. She appeared very well after delivery, except the frequent recurrence of severe after-pains, which, however, were relieved by the use of opium. At 9 o'clock, P. M. she complained of much pain, soreness, and tension, in the right labium pudendi, which, upon examination, was found to be much swelled; it continued to increase until it acquired a very large size, and quickly became vesicated. The internal lining of the labium was stretched to extreme thinness; was very black; and studded all over with little blisters, which contained a yellowish

serum. I made with the point of a lancet a number of punctures, from which issued a considerable quantity of bloody serum; this afforded much relief.

3d. Pain rather less; fever and delirium; no discharge of urine, owing to the pressure of the tumour upon the mouth of the urethra. She was ordered to lose twelve ounces of blood—the urine was relieved by pressing the tumour to one side, and at the same time raising it a little. An incision was made with the shoulder of a lancet through the extent of the inner portion of the tumour; this brought into view the coagula, with which the whole of the cellular structure of the part was completely engorged; much relief followed this operation. A strict antiphlogistic regimen was ordered.

4th. Pain and fever much diminished; urine relieved as yesterday; a considerable discharge of thin, grumous, fetid blood; bowels confined; an ounce of the sulphate of magnesia was given, and the charcoal poultice was directed.

5th. Pain less; urine unobstructed. The salts operated well. The discharge from wound considerable, but extremely fetid. Fever diminished—poultice continued.

6th. Freer from pain and fever; urine free—fetor of the discharge extreme. Four or five ounces of coagulum dislodged by gently and firmly pressing the external and inferior portion of the tumour. Poultice continued.

7th. Nearly free from pain; fetor of discharge diminished; the tumour lessened in size. More of the coagulum discharged by the same means. Fever nearly gone—urine free; bowels confined. Salts repeated.

8th. No pain—can turn on either side—fever gone—fetor less, though the discharge is considerable.

15th. The coagulum entirely evacuated—healthy pus; fever none; fetor gone. From this time the parts healed kindly, and in the sixth week they were entirely well. Her strength much improved by the bark in decoction, and the elixir vitriol. I attended this lady with several children after this time, without the smallest accident happening to the parts.

Case III.—1809, August 30th. Mrs. C. was delivered about 5 o'clock, P. M., of a large first child, after a labour of six hours. The midwife left her about an hour after, as well as is common. At 10 o'clock the same evening, I was sent for in great haste, in consequence of a large and sudden swelling taking place soon after the midwife had taken her leave. Upon inspection, the left labium was found much distended, very livid, and extremely painful. The distention or tumour not so great as in the preceding case; this, however, was perhaps, in a degree, owing to my having been sent for immediately after the part was observed to swell, and its farther progress interrupted by my puncturing

the tumour in several places, which gave opportunity for a considerable quantity of the thinner part of the blood to escape from them, which afforded some relief; or at least prevented farther distention. The part was ordered to be covered with a soft bread and milk poultice, and, as she was suffering much pain, a full dose of laudanum was directed.

31st. Still in great pain; high fever, and the tumour as large as it was the preceding evening, and vesicated as in the former case. Directed the loss of blood; made an incision the whole length of the tumour, which afforded much relief. The charcoal poultice was ordered, and the urine relieved as in the former case. Matters remained pretty much the same until the

5th of September. On my visit this day, I was enabled, without much force, to express a large portion of coagulum, and did so every succeeding day, until the 15th; considerable quantities had come away at every dressing; and at this time, (the 15th,) the sore was entirely free from it, and presented a large, but a healthy surface. The charcoal poultice was continued until the wound suppurated; it was then, as well as in the other case, dressed with simple cerate. The wound was entirely closed by the end of the fifth week. Her strength was improved by bark, &c.

In neither of the three cases just related, was there any fungus produced, to interrupt the progress of the cure; a circumstance much to the advantage of the patient.

The mode of treatment pursued in these cases appeared to succeed so well, that I have been induced to relate it pretty much in detail; and I have been more strongly induced to this, as I have met with no account of the particular mode of treating this accident, so painful and alarming to the patient, and embarrassing to the young practitioner. The incision through the extent of the tumour, I am induced to believe to be the best mode of treating it; for we can never expect the extravasated blood to be absorbed; and when the distention of the parts is not very quickly taken off, the whole of the internal membrane of the labium will be sure to slough. I have, therefore, been led to believe it to be the better practice, though I have no authority for it. It is true that Le Dran mentions his having evacuated twenty ounces of blood by an incision; but the plan does not appear to have been adopted as a general practice. But, from the relief it afforded in the two cases in which I employed it, and the opportunity it immediately gives to the confined coagulated blood to escape, and also from its enabling us more effectually to remove the fetor, I am every way convinced it is the proper mode of treating these tumours.

I have ventured to recommend the use of the pyroligneous acid, from analogy, rather than from experience, in this particular complaint. But its efficacy in removing the stench of putre-

faction, even that of cancer, I have repeatedly witnessed; and I recommend it for the complaint in question, with as much confidence as can arise where it has not been absolutely tested.

Sect. VIII.—*Imperforation, and too great Density of the Hymen.*

A dispute has long been maintained, by a number of celebrated anatomists, whether there really belongs to the female organs of generation, the appendage called hymen. The dispute is far from being settled to this day: nor is it a matter of much consequence whether it ever be, or even whether it ever can be, if the same mode of reasoning be followed by all who deny its existence. If it be attempted to demonstrate its presence, they, like Ambrose Paré, declare it to be an unnatural production. For if the occasional absence of a production is to be assumed as the natural condition, in defiance of its frequent presence, it would "confound all our philosophy;" for acephali would be considered as the natural state of the human body, in spite of the ten thousand examples to the contrary.

All that has been urged by Fallopius, Vesalius, De Graaf, Buffon and many others, amounts but to this negative; that they did not always find the hymen when they sought for it. And the cause of this is, perhaps, satisfactorily accounted for by Cuvier, by saying, "Pendant longtemps il y à eu des disputes assez ridicules sur l'existance, de cette membrane; on avait peu d'occasions de la voir, à une époque où l'anatomie ne s'exerçait que sur les cadavres criminels, et l'on s'appuya ensuite sur des observations incomplettes, pour soutenir des systèmes hazardés."—Dict. des Scien. Med., art. Hymen.

If the existence of the hymen be denied, it would be in vain to talk of its imperforate state; yet those who have done so have furnished examples of this condition. With respect to this state of the hymen, we have nothing to add from our own experience, as we have never met with an instance of imperforation. All, therefore, that we can say upon this subject, must be derived from the observations of others.

The first inconvenience that is experienced, is soon after puberty: the menstruous fluid is duly secreted; but, not finding an outlet, it accumulates from time to time, until the uterus itself, after the vagina is completely filled, becomes distended, and this sometimes to a very large size, before the cause of suffering is discovered. Thus, Dr. Denman relates an interesting history, where this state existed in a young lady, who, after incurring the ill-natured suspicions of those around her, submitted to an examination, which eventuated in the discovery of the imperforate state of the hymen. The Doctor says, "The circumscribed tumour of

the uterus was found to reach as high as the navel, and the external parts were stretched by a round soft substance at the entrance of the vagina, in such a manner, as to resemble that appearance which they have when the head of a child is passing through them; but there was no entrance into the vagina. On the following morning an incision was carefully made through the hymen, which had a fleshy appearance, and was thickened in proportion to its distention. Not less than four pounds of blood, of the colour and consistence of tar, were discharged;[1] and the tumefaction of the abdomen was immediately removed. Several stellated incisions were afterwards made through the divided edges, which is a very necessary part of the operation; and care was taken to prevent a reunion of the hymen till the next period of menstruation, after which she suffered no inconvenience."—Introduction to Mid. Francis's ed. p. 110.

When the hymen is imperforate, the patient suffers at each return of the menstrual period; and these pains so much resemble the pains of labour, as to have been sometimes mistaken for them. Dr. M'Cauly confesses, that, in one instance, he mistook the protrusion of the hymen for the membranes forced down by the pains of labour; this case, like that of Dr. Denman, was relieved by incision through the dense and resisting membrane. Smellie's Col. I. No. 1, Case V.

In the case just related from Smellie, the patient suffered severely; and what added to her distress much was the suppression of urine, which was not relieved until the contents of the vagina were discharged.[2] There is something curious in the economy of the uterus, when its body becomes distended by the accumulation of the menstruous fluid: it seems to yield for a time without much opposition; but by and by it makes an effort to discharge its contents, and pains are excited. After these pains

[1] Dr. Denman observes of this blood, that, "it was not putrid, nor coagulated, and seemed to have undergone no other change, after its secretion, but what was occasioned by the absorption of its more fluid parts." This is one among the many proofs that present themselves, that the menstruous fluid is not common blood. Frank mentions a case, (tom. 3, p. 243,) from "Les Actes Médico-Physiques," of a young girl of fifteen years of age, in which the hymen was imperforate. Her abdomen was distended as much as is usual at the sixth month of pregnancy, from the accumulated blood behind the obstacle. She was subject to violent pains in the back, hypogastrium, and in the genitals; and thought she felt something within her. An incision was made through the hymen, from which were discharged five pounds of thick black blood, without any disagreeable odour, and by which she was entirely relieved. He also mentions one, furnished by one of his pupils, of a young girl, whom every body accused of being pregnant—an incision through the hymen gave issue to several pints of blood, no ways changed; this operation was followed by fainting, but the girl's reputation was saved.

[2] A similar case is reported by Mr. Coley, in the "Provincial Medical and Surgical Transactions." In this case, recourse was had to the division of the hymen with entire success. "Nearly four pints of tar-like fluid gushed out."—See Medico-Chirurg. Rev. for July, 1833, p. 190.

have continued awhile, they cease; nor are they renewed, until another menstrual period arrives. It is now again stimulated to contraction, and pains again declare themselves; and in this manner, things proceed until art affords relief. The most remarkable circumstance attending these cases is the cessation and renewal of pain. The menstruous fluid is, to all intents and purposes, an extraneous substance to the cavity of the uterus when retained there; the surprise is, that it should not continue its painful contractions without ceasing, but this is not the case —for after continuing a certain time, the patient enjoys an interval of ease; nor is the calm disturbed, until a fresh secretion, by renewing distention, again provokes it to contraction. This calm may be, and most probably is, owing to the thinner parts of this fluid being absorbed.

In consequence of the vagina and uterus being filled with this fluid, its pressure after awhile becomes very severe; it not only produces pain, as just stated, but it also interrupts two important functions; namely, the discharge of urine, and the evacuation of the fæces. And in a case related by Mr. Fynney,[1] convulsions were repeatedly produced. Mr. Fynney, in his case, had to contend with a hymen "more than an inch thick;" this is not, however, usual, agreeably to Mr. Burns, who declares they are generally thin. The quantity of fluid discharged is sometimes very large. In most of the cases it is said to be at least two quarts; but Benevoli, as quoted by Mr. Burns, makes the quantity in his patient to be thirty-two pints. They appear all to agree as to the appearance of the evacuated fluid—for in no instance is it mentioned, that it is found coagulated.

The remedy, in all instances, appears to be the same: it is to cut through the confining membrane. In some instances, as just noticed, the hymen has been found very thick; which, of course, will require additional caution in the performance of the operation. It is desirable, upon such occasions, that the parts be well distended, as it not only gives greater facility to the operation, but also additional safety. Dr. Denman says, "Some caution is required when the hymen is closed, in those who are advanced in life, unless the membrane be distended by the confined menses, as I once saw an instance of inflammation of the peritoneum being immediately produced by the operation, of which the patient died, as in the true puerperal fever, and no other reason could be assigned for the disease." Introd. p. 110. And, in confirmation of this opinion, we will mention a case of imperforate hymen, in which the operation was performed, and was followed by death. In a report of the "Lowestoft Infirmary," there is a case recorded by Mr. W. C. Worthington, of a girl of

[1] Med. Comment. Vol. III. p. 194.

fourteen years old, on whom was performed the operation for the retained menses, by cutting through "a dense cellular structure, of half an inch in thickness, situated at the orifice of the vagina," and through which was discharged "about a pound of dark-coloured fluid." "The third day after the operation, severe pain in the abdomen, with extreme tenderness, supervened, together with exquisite gastric irritation. Notwithstanding a strict antiphlogistic plan of treatment was adopted, the patient died on the following morning."

On examination, it was evident, that exquisite peritonitis was the cause of death, as just mentioned by Dr. Denman. Mr. Worthington or the editor of the Med. Chir. Rev., relates a case from Professor Langenbec, very analogous to this: the patient died on the fifth day, and, in consequence of which, he gives precisely the opposite opinion of Dr. D., namely, that the operation should be performed early, and before the accumulation is great. In considering these cases, we should be inclined to the opinion of Dr. D., and for the reason he urges. In the case above related by Mr. W., it is evident that the parts were but very moderately distended, as but "about a pound of fluid" was evacuated. In the fatal cases related, it is more than probable that a portion of the vagina was cut through, and the peritoneum thus wounded; now if this be true, it is evident, that the more the parts are distended, the less will be the risk of this accident.

The hymen is sometimes found extremely dense, though perforated sufficiently for the passage of the menses, but not enough to admit with freedom the venereal congress. Yet it seems it does not prevent conception, however it may embarrass coition. A number of unquestionable cases are upon record, where this act was never properly consummated; yet the women were impregnated, and the child's passage through the os externum was facilitated by an operation at the last period of labour. Hildanus, Paré, Ruysch, Mauriceau, and many others, make mention of such cases.

The late Dr. Cleaver invited my friend Dr. Chapman and myself to witness a case of this kind. The woman had been in labour with a first child, for at least twelve hours, when we saw her; the pains were now strong and frequent; the perineum very much distended, and alone supported the efforts of the uterus. The os externum was entirely closed, if we except an opening of about the size of a common goose-quill. Things had been precisely in this situation, several hours before we were called; and as all chance of spontaneous dilatation, or even one effected by the force of pain, was at an end, it was thought best to cut the rigid hymen, and give a chance to the vagina to dilate, and the perineum to unfold.

I accordingly passed a probe-pointed bistoury between the

child's head and the hymen, and made a slight incision in the latter, which enabled me to introduce a finger, by which I dilated, or rather broke down, the whole of the resisting membrane, in such a manner, that there was nothing but the natural resistance of the parts to contend with. In about two hours more the child was safely delivered, and without the parts sustaining any injury by the passing of the head.

The mode of operating in this case perhaps may not have been different from that pursued by others under similar circumstances; for none, so far as I know, have described the exact manner in which it was performed. But, as they have been silent upon this point, and as my previous impressions as to the mode of affording relief, were altogether different from what I found necessary in this case, I think it best, it should be clearly understood, that all that can be necessary to ensure success to the operation is, merely to destroy the continuity of the hymen in one part of it; for by this means the opening will be large enough immediately for the finger to pass; and by the aid of which, by giving it a rotatory motion, the adhesions of the hymen with the vagina may certainly be destroyed—at least, so it appears from its success in this case. I cannot think it ever necessary, on reflecting upon the mechanism of these parts, to cut into either the vagina or perineum, or even to wound them.

Sect. IX.—*Of Pruritus, or the Aphthous Condition of the Vulva and Vagina.*

One of the most troublesome and distressing complaints to which the female is subject, is the pruritus, or itching of the pudendum. Women who are not pregnant are subject to this complaint; though not equally liable as those who are; in both, the desire to scratch is so indomitable, as sometimes to put decency at defiance. I knew one instance in which the itching was so severe, and so continued, that the lady was obliged to keep her chamber for three months. The only relief that was found in this case, was from the almost constant application of water, in which ice was dissolved. Every remedy that could be suggested by two eminent practitioners of this city, was tried in vain. No relief was obtained until after delivery. This case came to my knowledge in the year 1796, by being related by one of the gentlemen in attendance. The parts were not examined; the child was delivered perfectly healthy, though the mother was much exhausted by her long sufferings, and the severe discipline to which she submitted in hope of relief.

The disease may attack the whole of the vulva, and sometimes it affects the vagina. It sometimes commences in the early part

of pregnancy: when this happens, and is neglected, it may continue until delivery takes place. At other times, and this I believe to be the most common, it does not attack until the sixth or seventh month. If cleanliness be not observed, the complaint is sure to be much aggravated; though no attention of this kind of itself is capable of preventing or overcoming this complaint.

A great variety of causes have been assigned for this disease; such as want of cleanliness; an acrid secretion within the labia; an inveterate eruption; the pediculi pubis; varicose veins; an aphthous efflorescence, &c.

It is certain that in a number of the cases which have fallen under my notice, a want of cleanliness could not be considered as a cause; though we are persuaded it is well calculated to increase it. There must be a secretion of some acrid fluid in all cases of pruritus, be the remote cause what it may; and it seems to renew the itching whenever it may happen. In some instances, this itching has intervals of longer or shorter duration; and its return seems to be produced by a discharge taking place of a thin and generally limpid serum, of which the woman is perfectly conscious; and aware, at the same moment, that her troubles are about to be renewed. I have met with no instance in which a dartrous eruption, or pediculi pubis, could be considered as causes; nor have I met with one where it has arisen from a varicose vein.

The aphthous efflorescence, as an attendant on this complaint, we believe we were the first to point out; and for this discovery we were indebted to accident, as will be now mentioned.

The precise nature of this affection had not been pointed out; and accident furnished me with an opportunity of detecting a condition of the parts, where this complaint was in full force, which has never, I believe, been noticed by any one; and which led to, generally, a very successful mode of practice.

A lady, whose husband was more notorious for his gallantries than for his domestic virtues, was attacked, in the incipient stage of pregnancy, with an intolerable itching in the pudendum, and even within the os externum. The woman suspecting the affection to be venereal, I was sent for in April, 1815, and she gave such an account of her feelings as to make me think it might truly be the case; I therefore proposed an examination of the parts; which was finally acceded to. Upon separating the labia, the whole face of the vulva, the os externum, and as much of the vagina as could be viewed, were covered with an incrustation of aphthæ. I assured the patient her disease was not what she suspected, but one, I hoped, that could be quickly removed. I accordingly ordered a strong solution of borax in water, and requested her to wash the parts with it four or five times a day; as well as to throw it up

the vagina by means of a syringe. She did so; and was perfectly well in twenty-four hours.

I was led to the employment of the borax in this case, from the analogy which the thrush in children furnished; and its success since has led me to regard it, if not as a certain, yet as a very valuable remedy: it has rarely failed in my hands, or in the hands of others, as far as I have hitherto learned. It therefore always deserves a trial; especially as I have never known it aggravate the complaint. I have had a number of cases within the last few years, in nearly all of which it proved completely successful; but not with equal speed. Two of these cases just mentioned were pretty obstinate, but especially one; in both, I was obliged to bleed and purge liberally; and to confine the patients to low diet; but in one, I was under the necessity of applying leeches to the part, before the disease would yield. I thought that small doses of magnesia, with the daily use of lime water and milk, were useful in this case. But, in the others, the disease yielded, almost immediately, to the simple application of the borax and water.

Where this complaint proves at all obstinate, depletion adds very much to the influence of the borax; I therefore would advise attention to this circumstance. I am now certain, however, that in every case of pruritus, there does not exist this aphthous efflorescence. I have had but three opportunities of examining the parts under such circumstances; in two of which the aphthous condition obtained; but in the other the parts were as described below.[1]

We do not know in what proportion of cases this state of the parts may exist—we are well satisfied, it is not present in all. This fact we were enabled to ascertain a few years since: in this case, the external labia, the whole vestibulum, the carunculæ myrtiformes, and as much of the vagina as could well be viewed,

[1] Cases certainly do occur in practice, that have not yielded to the plan we have suggested; therefore we feel grateful for the knowledge of any remedy that has proved successful, when the ordinary means have proved otherwise. We therefore, feel indebted to Dr. Philip Younge, of Thomaston, Georgia, for the following case, in which dry calomel proved highly useful. "I had it sprinkled," says the Doctor, "over every spot of inflammation within the vulva, as thoroughly as the nature of things would permit, three or four times a day. Whenever the itching became urgent, my advice was to wash the part, by means of a syringe, with cold water, and reapply the dry calomel, which immediately calms the most insufferable irritation. I have pursued this plan, when the disease appeared perfectly unmanageable, with the happiest effects; although the disposition to recur was manifest until delivery, this remedy always appeased the distress." Amer. Journ. of Med. Sci. for Aug. 1833, p. 555.

Dr. Carron du Villards, says he has employed, with much advantage, lotions of the distilled water of the Prunus lauro-cerasus, in this complaint, after it had resisted every other application.—Id. for Nov. 1834.

were swelled and much inflamed. The appearance of the inflammation was singular; it was of a copper red-colour, with a number of slight abrasions; by which the sensibility of the parts was very much increased. From the whole of the inflamed surface, an ichorous dew seemed to be distilling constantly; and when this accumulated in a sufficient quantity to make the woman sensible a discharge was taking place, a most intolerable itching would begin; nor would it cease, until the poor woman would be almost exhausted by her efforts to appease it. Cold iced water was her only solace; and this afforded but a very temporary suspension of her misery.

This patient, it may be proper to remark, was not pregnant; she was advancing toward the critical period of life, and had been always, at least for many years, subject to fluor albus. Suspecting some disease in the uterus itself, I examined my patient per vaginam: this afforded no room to suspect any thing wrong with this organ; I also carefully traced the urethra, but could detect nothing amiss in it. I prescribed a free use of the saturated solution of the borax, both as a wash, and as an injection: from this, much relief was experienced; but the disease not yielding, as I had frequently found it do in other cases, I began the use of the balsam copaiva, agreeably to a suggestion of my friend, Dr. Ruan, of its usefulness in this complaint: in this she persevered, and in a few days she was completely relieved.

I believe the balsam, in this case, contributed much to the relief of the poor woman; this belief is founded on its success in another instance, where it alone was used, if we except frequent bathing with lukewarm water, one bleeding, brisk purging, and an extremely abstemious diet.

Dr. Ruan informs me he has succeeded with copaiva, after the borax had failed in several instances; and, so far, I am disposed to consider it a valuable aid to this article. In cases of pruritus accompanied by the aphthous incrustation, I think the borax will *almost* always succeed; therefore, I prescribe it in all instances for which my advice is required; but what proportion these cases bear to those without this efflorescence, I am altogether unprepared to say at this moment.

In a case of great violence, and as great obstinacy, where it did not yield to depletion, to low diet, nor the borax, instant relief was obtained by an injection of a small teaspoonful of the aqua ammonia puræ, to a half pint of water. The mixture was had recourse to in the middle of the night by the patient, while under great agony from the violence and pertinacity of the itching; and which she considered rather as a desperate experiment, than as a probable means of relief; yet it succeeded like a charm. During the time the itching was troublesome it was used for several days, with almost instant advantage; but after this, it seemed to

lose its influence. The borax was again resorted to; and it completely succeeded; this lady was three months advanced in pregnancy, and had been before obnoxious to this complaint, when in this situation. And I have much pleasure in stating, since this period, I have found much benefit derived from the use of the ammoniated water as just directed, in several very troublesome cases of pruritus.[1]

The cases which occur during pregnancy seem more obstinate than those which take place at other times, if we except such as occur towards the decline of the menses, and where there is evidently a disease of the womb. In these latter cases relief may be obtained; but they are perhaps never cured, unless the affection, of which pruritus is a symptom, is also removed. Much will depend upon frequent washing, and often rinsing out the vagina by means of a large and powerful syringe. The solution of borax may be used for this purpose with advantage; and the balsam copaiva might perhaps be useful in such cases: but of this, I have no experience. Opium, or opium and camphor, at bedtime, in pretty full doses, have a temporary good effect; at least, it procures a degree of rest that would otherwise be denied. The woman should exercise much forbearance, and not too easily yield to the gratification of the predominant feeling. I have had a case lately, in which this complaint followed abortion—it was immediately relieved by the borax.

This complaint has been generally confounded with one of a very different character, named the furor uterinus, but they are very easily distinguished from each other; the latter is a voluptuous sensation, accompanied by venereal desire; and is not accompanied by an itching, properly so called; but by a sensual irritation, which makes the *rubbing* of the parts contribute in a degree to gratification. The pruritus, on the other hand, is an

[1] In the treatment of this disease it is of much consequence that the local remedies should be thrown up the vagina by a syringe, as the following history will show. Mrs. K., in her sixth month of pregnancy, was attacked with pruritus. The solution of borax was recommended. On calling on her a few days after, she informed me she was not relieved in the slightest degree. I inquired whether she was careful in the use of the injection; she seemed surprised at the question. I now learned that her husband had omitted this part of the directions, as he understood that bathing the parts was all that was necessary. The syringe was now made use of, and that patient was entirely and promptly relieved. From this it would appear, that the efflorescence may occupy the vagina to a considerable extent.

Mr. Churchill seems to think that libidinous desires almost always attend this complaint when it exists in its more exquisite form. I cannot but differ from him on this point. Indeed I have never seen nymphomania result as a "degeneration"* of pruritus vulvæ. The former is decidedly a very rare disease in this country. I have never seen more than two or three well marked cases of it in the whole course of my practice.

* Princ. Dis. of Females, p. 7.

intense, and an indomitable itching, not accompanied by voluptuous desire; but which finds, to a certain extent, a relief from *scratching*.[1] For, were the feelings excited in these cases to be allayed by any mechanical application, one would be selected that would better comport with the pruriency of the thoughts which suggested the necessity, and the nature of the means; while the other would seek relief from the application of the nails, or some other equally rough substance. The two complaints must therefore be looked upon as altogether distinct in their nature and objects; nor does the one ever degenerate into the other, as some have imagined; for there is no analogy whatever between pruritus and furor uterinus. For the one, as we have said, is an ungovernable lasciviousness; the other an intolerable itching, without the slightest desire. Indeed, from all I can learn on this subject, pruritus is so far from being accompanied by desire, that women at such times manifest the greatest repugnance to the venereal act.

We have known a complaint communicated to the male, by intercourse with a woman labouring under pruritus; it was very similar to that which infested the female, in its general character; that is, there was great itching and swelling of the prepuce; the whole internal surface of which, together with the glans penis, were covered with an aphthous efflorescence. When this occurs with the married man, much disturbance is sometimes created, from a supposition that the wife has been unfaithful, and the contrary; and much will depend upon the good sense and experience of the medical attendant, that it shall not be subversive of domestic peace.

Indeed, it has occurred in more instances than one, within our own knowledge, where the woman has thought herself the injured party: and in one case, the recrimination was mutual. In this instance, the friends of the parties assembled to determine on the terms of separation; when it was suggested by one of them, who happened to be more rational than the rest, that before they proceeded to such an extremity, their family physician should be consulted; and that it should be left to him to determine, whether there really was any cause, from the nature of the disease in question, to justify such a measure. We were accordingly sent for. We gave an attentive hearing to both sides of the question. From what was related, we were at once of the opinion, that there was not the slightest ground, for either to be charged with a want of fidelity. We requested to speak to the gentleman in private: when he withdrew, we solicited an examination of the parts sup-

[1] Dr. Waller recommends a solution of 5 or 10 grains of the nitrate of silver to the ounce of water as an injection.

posed to be so much injured, and found the prepuce and glans penis in the condition stated above.

From the appearance of the penis, we were convinced that the lady had nothing but "pruritus;" and we assured the husband that this was the case; and upon a private conversation with the lady, we were confirmed in the opinion given to the husband; and also fortunate enough to make her suspend all further proceedings, if not entirely to satisfy her that she had nothing to apprehend, as we had previously done with the husband.

It was mutually agreed, therefore, that no further steps should be taken in the business; in the mean time, we were to satisfy each that they had nothing to complain of. The borax wash and injections were ordered for the wife; and for the husband, the borax wash alone. In three or four days both one and the other were perfectly well; and, to this moment, most happy in the explanation they had so fortunately received.

Chambon[1] describes a variety of pruritus which we have never seen: it is where the neck of the uterus is the seat of the itching. As we have never met with this case, we shall employ his own description of it. "Le prurit du col de la matrice est plus intolérable qui celui de la vulve, parce qu'on ne peut satisfaire le désir de grater cette partie. Quand il est porté à un certain dégre d'intensité, il cause un emportement, une apparence de fureur, et des movemens convulsifs, des distorsions du trone, des gonflemens du bas ventre, et des suffocations semblables à celes qu'on remarque dans la passion histérique. Les femmes qui voient leurs maris dans cet état, deviendroient furieuses, si la liqueur, séminale de l'un et de l'autere ne tempéroit pas la chaleur du col de la utérus."

He recommends no particular treatment for this affection; nor indeed for the other, save the most feeble that can well be imagined; as bathing, fumigations, and injections, together with decoctions of some of the mucilaginous grains, as flaxseed, quinceseed, &c.

Dr. Denman says, "When this complaint, independently of pregnancy, originates from an affection of the uterus, and is of long continuance, the application must be varied, and such medicines given as promise relief by changing the state of that part. Sulphur, taken internally, has sometimes been of much service; or applied to the part as a powder, liniment, or lotion. The burnt sponge, with nitre, and the extractum cicutæ, have also been given with advantage; together with a lotion composed of equal parts of the aqua zinci vitriolati cum camphora and rose water; or the application of the ung. hydrargyr. fort. I have also frequently given five grains of Plummer's pill every night at bed-

[1] Des Maladies des Filles, vol. ii., p. 73.

time for a month, and a pint of the decoction of sarsaparilla daily; though there was no suspicion of any venereal infection."[1]

Dr. Denman farther observes, "It is sometimes occasioned by a disease or affection of the bladder, and is then equivalent to the itching of the glans penis in men.—When this complaint has been occasioned by an affection of the bladder, the constant or daily use of a bougie in the urethra has, in some cases, effectually cured the patient."[2]

In young female children, we very often witness an inflammation and swelling of the labia, accompanied by a discharge of rather a purulent appearance, attended by great and frequent itching. To relieve which, they rub the parts violently, and even in sleep, until they become denuded sometimes of the cuticle. This, however, I believe, never happens, but where there is a great neglect of cleanliness; at least frequently washing the parts with warm water has always cured it.

Dr. Denman also says, that "those women who carry dead children are more subject to this disease than those who carry living children." This remark is not confirmed by my own experience. I have known many instances, where dead children were carried, without this disease being present; and I have known a number of cases of pruritus, where the children were certainly born alive.

Gardien recommends the application of blisters, in those cases of pruritus which proceed from a dartrous eruption. He says, "Si ce prurit dérive d'une dartre fixée vers ce lieu, on ne peut attendre de soulagement que des médicamens propres à changer l'êtat de la malade, telsque les bains sulfureux, l'usage intérieur du soufre, et autres moyens adaptés à la nature de l'affection. Un vésicatoire placé à la partie interne de la cuisse est souvent lemoyens le plus sûr de déliver la femme de ce prurit en déplaçant la dartre; on pourrait l'appliquer sur les grandes, lévres mêmes, pour changer la mode de sensibilité de la partie en y établissant momentanément un autre mode de douleur."—Traité Complete, vol. i. p. 73.

[1] Introduction to Midwifery. Francis's ed. p. 109. [2] Ibid.

CHAPTER III.

OF THE DISEASES OF THE VAGINA.

The diseases of the vagina may be either natural or accidental. The natural consist, agreeably to Dr. Denman, of "such an abbreviation or contraction as to render it unfit for the purposes for which it was designed."[1] We have never encountered more than one such case; and this was not so excessive as altogether to destroy the usefulness of the part.[2] A great difficulty was at first experienced from coition; but this gradually lessened, though never altogether removed. Upon examination, it was found to be difficult to pass the finger unless the parts were previously well lubricated; and this expedient was always necessary, before each conjugal consummation. The os uteri was found just within the os externum; and the whole distance to which the finger could be passed, did not exceed an inch, or an inch and a half.

This person was barren, but extremely anxious to be fruitful; aware of some natural defect, she submitted to the examination which led to the knowledge of what has been just stated. As there was nothing to be done in this case, the parts were left undisturbed by any attempts to dilate the contracted passage.

In greater departures, Dr. Denman says, "The curative indications are to relax the parts by the use of emollient applications, and to dilate them to their proper size by sponge or other tents, or, which are more effectual, by bougies gradually enlarged."

Dr. Denman informs us, that in a case of this kind, the efforts of the husband to overcome the resistance of the parts, so irritated them as to produce a purulent discharge from them, which was

[1] Morgagni mentions a case in which the vagina was only one-third of the common length; this was terminated by a firm fleshy substance—this woman was barren. "Columbus dissected a woman who always complained of great pain in coitu. The vagina was very short, and had no uterus at its termination." Burns, p. 87.

[2] Since writing the above, a woman of thirty-five years of age presented herself for advice. She informed me she never had menstruated, nor had felt any symptoms that would indicate it. She had been married nine years, had all the marks of womanhood; was not averse to, but rather enjoyed sexual intercourse; but never became pregnant. Upon an examination *per vaginam*, this canal was found narrow, and about an inch and a half in depth, terminating in a *cul-de-sac*. Nothing like a uterus could be felt. We have said, this woman had never been impregnated; not because she had an imperfect vagina, but because there was no evidence of a uterus; at least not of a healthy one; for had there been one, the menses would certainly have been secreted: and she might have been relieved by an operation.

mistaken for a venereal affection. The inflammation was subdued by the ordinary means, and living for a time absque marito; the parts were afterwards dilated by means of tents and bougies of various sizes. After her return to her husband, she became pregnant; and was safely delivered, after a slow, but not an uncommon labour.

The accidental consists of cohesions of the sides from previous ulceration; and of cicatrices after such ulcerations.

The difficulties arising from such causes are severely felt in the time of labour, as they are rarely of such extent as to interrupt coition. The time to be useful in such cases is, before the parts heal; if attended to then, much mischief may be avoided by the proper use of tents, &c. During labour extensive bleeding seems to be the only remedy. See System of Midwifery, chapter on Tedious Labour, by the author.

CHAPTER IV.

OF LEUCORRHŒA.

This complaint has been familiar to the practitioner from the time of Hippocrates to the present moment; yet it is not so well understood as always to ensure the patient a certainty of cure. Indeed this affection, even at the present day, is ranked by many among the opprobia medicorum. Women seem to be obnoxious to leucorrhœa in every known climate; and in every situation of life, she is more or less exposed to its occurrence. So decidedly is this the case, (at least in civilized life,) that the woman who has not had the complaint, appears to have escaped from an impending mischief, rather than to have been constitutionally entitled to the exemption. Yet some are more obnoxious to it than others; and this difference arises principally from the following causes:—

First. Original constitution or temperament: thus, women of the sanguine temperament and rigid fibre are less liable to this complaint, than those who are fair-skinned, light-haired, and of a relaxed fibre.

Second. Location, atmosphere, and occupation, have their influence, or so modify common agents, as to render them capable of producing it. Thus women of high and mountainous countries, who enjoy a pure and dry air, are freer from this complaint than those who inhabit a moist and cold climate.

Also, those who live in the country, and who, from the nature of their occupations, are obliged to use much exercise, are less visited by this scourge than the indolent women of large cities; hence, women of very sedentary habits, and who indulge in luxurious idleness, are almost sure to have this complaint. Mr. Churchill seems to imply that the uterine leucorrhœa is as common, or more so, than vaginal—which if it be a fact in England is not so here; indeed we consider this form of the disease to be extremely rare, agreeably to the experiments of ourselves.

Third. Habits of life, and the quality and quantity of nourishment, will have an operation upon all constitutions or temperaments. Thus women who indulge much in bed, who keep late hours, who over-stimulate, who drink immoderately of thin, unnourishing drinks, as tea and coffee, are more disposed to this discharge, than those who observe a contrary plan; and such are especially liable to it, who use the warm bath too freely, or are in the habit of employing "foot stoves." Hence, the women of Holland are particularly liable to leucorrhœa; as their climate, habits, and nourishment, all dispose to it.

Fourth. Habits of cleanliness will tend very much to preserve the parts concerned from this discharge, even in those who may be disposed to it; while the neglect of this physical virtue will be almost sure to produce it, even in those not otherwise disposed to it.

At all periods of life, females are liable to an increased discharge from the vulva; thus, we witness it in the infant girl, and in the aged matron, but not equally often in both; it is more frequently found with the latter than with the former. This complaint frequently commences about puberty—it may, therefore, anticipate, accompany, or follow the menstrual secretion; but, at this period, it is of but temporary continuance, for the most part, unless great errors have been committed in the management of the female at this time; or unless there should be a particular predisposition to the complaint, from hereditary taint, or original temperament.[1]

As the woman advances in life, and after she has become a mother; when her necessities demand great exertion, and prevent proper indulgences during pregnancy, and after labour, she is more particularly liable to it, than at any other period; and then generally in its worst forms. Hence, women in the lower walks of life are more obnoxious to leucorrhœa than those who

[1] Gardien, and some others, think leucorrhœa is sometimes hereditary; he says, "Le catarrhe utérin peut attaquer, dès le bas âge, les filles qui ont eu pour mères des femes sujettes habituellement à un écoulement; mais cette leucorrhée héréditaire ne peut pas être distinguée de celle qui est entretenue par la débilité de la constitution: comme cette dernière, elle depend de l'organisation primitive, qui est faible et lâche." Traité Complete, &c., vol. i. p. 321.

indulge in what the others cannot enjoy; provided the latter do not abuse these privileges and comforts.

Women who are constantly exposed to the abuse of venery, from their calling or their necessities; or those who may too freely indulge in the gratifications of love without that necessity: and especially those who *selfishly* abuse the enjoyment, are always obnoxious to leucorrhœa.

Those who may suffer from long-protracted and difficult labours, or who may have been under the necessity of yielding to artificial modes of delivery; those who, from the relaxation of the system generally, and the uterine in particular, have sudden labours; those who have become debilitated from menorrhagia, diarrhœa, hemorrhoids, or who labour under irregularity, or suppression of the menses, are ever prone to this complaint.

Nervous and hysterical women are also liable to this complaint: it may not commence with these affections, though it is pretty sure to follow them; especially if great irritability of temper accompany, and this indulged in, by giving vent to sudden bursts of passion, or displays of bad humour.

Some are of opinion, that the season of the year has considerable influence on this discharge. Leake says, "I have attended more patients labouring under fluor albus in autumn than at any other season of the year, especially when the weather was uncommonly moist and cold." Diseases of Women, vol. i. p. 107. I have never observed this influence; and I am rather disposed to believe it accidental if it occur. A disease of such long standing as leucorrhœa almost always is; one for the most part so obstinately confirmed by local irritation and habit, is not very likely to be influenced by mere change of temperature, or moisture. It is not a sufficient explanation of this (perhaps assumed) fact, to say, that the surface which yields the discharge is like those mucous membranes which are affected by the changes of the atmosphere; and may like them be attacked by inflammation, and urged to an increase of discharge; for from their locality and perfect defence against the vicissitudes of season, they cannot be very liable to their influence. I fear there is rather too much refinement in these opinions, to be confirmed by fact.[1]

The only causes, capable of influencing this discharge, as far as I have been able to ascertain, are those which affect the system at large, or the uterus in particular; such as fever; passions

[1] The mucous membranes very generally sympathize with impressions made upon the skin; thus, the lining of the trachea; of the nostrils; of the throat; of the frontal sinuses, &c., are very often brought into morbid action, through the medium of the skin, by the changes in atmospheric temperature; but the uterus and vagina, we believe, are very rarely affected by such vicissitudes, however strongly they may affect the external surface.

or emotions of the mind; too stimulating diet; gastric irritations; the approach, and the cessation of the menstrual discharge at each period; pregnancy; and excessive coition. Now, all the causes just enumerated will be acknowledged capable of such a consequence, since the whole arterial system is acted upon; and of course the uterus and vagina, constituting important portions of the general system, must partake of the general effect.

I know several ladies, who are not habitually liable to fluor albus, yet will be attacked by this discharge, whenever their systems are excited by fever. Others will have an immediate leucorrhœal discharge, when angered, alarmed or overjoyed. Others upon drinking a glass of wine, extraordinary, or eating very highly seasoned victuals, will feel an increase of vaginal secretion; others, when their stomachs are acid, or otherwise irritated, will have fluor albus more abundantly; very many are only sensible of the existence of this disposition of the vagina, just before the catamenia are about to take place, or immediately after they have ceased. Most women who are accustomed to leucorrhœa, will have an augmented discharge when pregnant; while some will have it at no other time; and all perhaps will have it more abundant after too great venereal indulgence.

Almost all the authorities I have consulted on the subject of leucorrhœa, make it a constitutional disease; and hence the numerous causes assigned for its origin; and hence the multiplication of species and varieties by systematic writers.

Thus Pinel enumerates—

1st. The constitutional.
2d. The accidental.
3d. The vicarious.
4th. The syphilitic.
5th. The critical.[1]

While Blattin, who has written a very long and erudite work upon the subject, wishes to add to the above—

6th. From derangement of the menses.
7th. Hereditary.
8th. From indigestion.

Gardien, however, makes but three—

1st. Leucorrhœa from irritation.
2d. Constitutional or adynamic.
3d. Metastatic leucorrhœa; but observes, he would think it proper to add to these three species two others, where leucorrhœa is only symptomatic; one of these he would call "spasmodic leucorrhœa," and the other "sympathetic leucorrhœa."

That a variety of causes may dispose the uterus and vagina to take on the leucorrhœal action, we have no hesitation to believe;

[1] Dict. des Scien. Med. art. Leucorrhœa.

but the production of the complaint requires an immediate exciting cause, and that cause must be of an irritating kind. I would therefore only acknowledge—

1st. The leucorrhœa of direct irritation.

2d. The leucorrhœa of remote or indirect irritation.

3d. The leucorrhœa of habit.

I can form no idea of Pinel's first species; that is, I have no conception of any separate or distinct constitutional power, which, independently of local irritation, shall produce the disease in question; or, in other words, thus to influence the mucous membrane of the vagina and uterus, to an inordinate secretion.

His second species must necessarily comprise the exciting, or local cause; if so, it becomes the leucorrhœa of direct or indirect irritation; for the parts are only accidentally or fortuitously irritated, and brought into diseased action.

His third, or the vicarious, we have never witnessed, if we comprehend the term; that is, leucorrhœa by metastatis, or by an assumption of action. Yet we are not prepared to deny the possibility of such a condition of the uterus and vagina; for metastases are not unfrequent in arthritic or rheumatic constitutions; or where there has been a suppression of an accustomed evacuation, it may happen that other parts may assume a morbid action. But if this be admitted, it will only prove that there has been a transfer of irritation; consequently it forms "the leucorrhœa of irritation."

His fourth, or "syphilitic," is obviously the product of irritation; the syphilitic virus being the remote cause, the irritation consequent upon its application produces an increase of discharge from the surface to which it is applied; but this discharge is one of a specific nature, and not the matter discharged in common leucorrhœa; therefore, it is nothing more nor less than syphilis itself, so long as the syphilitic action continues. But after a time the surface may cease to secrete a morbid poison; though an irritation of sufficient force continue to maintain an increased secretion; therefore the disease, in this last form, is the leucorrhœa of direct irritation and habit.

His fifth, or "critical," may exist: we have never witnessed it; but if it occur, it must necessarily resemble his "vicarious," in its general phenomena; and, like it, becomes a leucorrhœa of irritation.

Those added by Blattin resolve themselves into the same species, or the leucorrhœa of irritation; therefore the sixth, or that from disordered menstruation, becomes the leucorrhœa of indirect irritation; while the seventh is only a modification of Pinel's first or constitutional leucorrhœa, which, like it, can only produce predisposition; for we do not believe that children are ever born with this disease upon them, or even subject to it very

soon after birth; and, were this even the fact, it might not be difficult to account for it, provided the mother was labouring under the affection at the time of the child's birth; for the matter of leucorrhœa might be applied to the child in transitu, and produce the disease, as it does sometimes purulent ophthalmia.

His eighth, or "leucorrhœa from indigestion," must necessarily be considered a disease of sympathy, or leucorrhœa of indirect irritation; since the source of irritation is the disordered stomach, with which the uterus and vagina sympathize.

The division of Gardien is much less exceptionable; for he reduces the species to three. His first, or the leucorrhœa of irritation, we cheerfully adopt, as it, strictly speaking, comprehends every thing. His second is exceptionable, as it is but a modification of Pinel and Blattin. We have no idea of a *disease* of pure weakness. His third is an adoption of the third of Pinel, and of course liable to the same objections.

In a practical point of view, very little is gained by the multiplication of knowledge of the remote causes of disease; and it is fortunate, in a general sense, that it is so—for were an absolute knowledge of the remote cause essential to the cure of the proximate or the disease itself, we should be much less successful in the cure, than we are at present; for, in very many instances, we are entirely ignorant of the remote cause.

In the "leucorrhœa from derangement in the digestive organs," (if it really exist,) the knowledge of the fact might be useful; as the remedies calculated to alter the condition of these organs should be addressed to them, with a view to destroy the source of irritation, and thus diminish the intensity of sympathy. In the case under consideration, much uncertainty would exist, whether the long-continued discharge from the vagina is not the cause of the derangement of stomach, as in chlorosis, rather than the derangement of stomach the cause of the discharge from the vagina. Gardien declares, "Le derangement des digestions accompagne constamment la leucorrhée constitutionnelle. Les tiraillement d'estomac ont aussi toujours lieu dans le catarrhe utérin chronique," p. 332. But this offers no illustration, or explanation, of which is the cause, or which is the effect. Besides, we feel rather disposed to doubt the frequency of this combination; for of one thing we are certain, that we have seen many instances of leucorrhœa without derangement of stomach; and we have as certainly seen many cases of dyspepsia, without leucorrhœa. Indeed, he seems to confess, that causes are admitted with too much facility; for he immediately after adds, "Les causes prédisposantes et determinantes du catarrhe utérin sont extrément variées: peut-être pourrait—on reprocher aux auteurs d'en avoir admis plusieurs trop légèrement, et d'avoir souvent conclu *post hoc, Ergo propter hoc.* Dans la recherche

des causes, on a souvent regardé comme liés deux phénomènes qui n'étaient, que coexistans," p. 322.

In the syphilitic leucorrhœa, as it is called, it would also be useful to know of its existence; since syphilis itself would require a distinct treatment from common leucorrhœa; in this case, the disease, as just observed, would not be leucorrhœa but syphilis, during the active stage; but the remote effects would require no specific treatment, as the leucorrhœa following syphilis would yield to the same remedies as leucorrhœa from any other cause.

Gardien's occasional extension of species into, 1st, sympathetic leucorrhœa; 2d, spasmodic leucorrhœa, answers no good purpose whatever in practice; especially as there is no satisfactory evidence of the existence of the latter; and the first will naturally range itself under the head of leucorrhœa, from remote or indirect irritation.

He tells us, (with what propriety the profession must judge,) "J'ai donné le nom spasmodiques, à celles qui surviennent chez de jeunes personnes, pour avoir pris du lait, ou pour avoir fait usage de compositions emménagogues," p. 319.

The division we have made, we think, can be defended, by both reason and practical observation.

Under the first head, or "the leucorrhœa of direct irritation," we would consider all such instances of this discharge as follow an active inflammation of the mucous membrane of the uterus or vagina produced by some local cause: as laborious parturition; application of instruments; excess of venery; irritating substances applied to the surface of the vagina; extraneous bodies introduced into it; a prolapsed uterus;[1] tumours within the vagina; injections of too stimulating a kind; or from the simple inflammation of the parts, as every portion of the body is liable to such attacks, without our being able to determine why this or that part may have been selected. We have known, in a number of instances, leucorrhœa to follow a lingering or tedious labour, both where instruments may have been used, and where they were not, &c.

Under the second head, or "the leucorrhœa of remote, or indirect irritation," we would range all such instances in which the vagina sympathizes with some other portions of the body; as with the uterus during pregnancy; or, in long-obstructed menses; producing, or becoming, what is called chlorosis; as when the menstrual action is about to furnish the catamenial discharge, or just after that action has ceased. With the rectum, when subject to hemmorrhoids, or when irritated by ascarides; with the gums, as in early dentition; with the stomach, when dyspeptic, &c.

Under the third, or "leucorrhœa of habit," we would enume-

[1] Of this particular cause, we have had occasion to speak under the head of "Prolapsus Uteri," which see.

rate those instances, which continue after the active or inflammatory condition of the parts has ceased; as after syphilis or gonorrhœa, and become like "gleet" in the male; a prolapsed uterus restored; or a tumour removed; for the vessels of the uterus and vagina seem to have less recuperative power than any other portions of the body. Almost every part of the body, which is susceptible of action, may have that action to continue after it has been once excited, though the exciting cause be removed; we witness it in the nervous and muscular systems, as in chorea, hooping-cough, &c.; in the vascular and glandular systems, as in the continuance of spitting, after the action of mercury has ceased; in the membranous and vascular systems, as the discharge of mucus after dysentery; and, agreeably to Mr. Hunter, as in the gleet after gonorrhœa. He distinguishes the condition of the mucous membrane of the urethra in gonorrhœa, and in gleet, in the following manner. "The venereal inflammation is of such a nature as to go off of itself, or to wear itself out; or, in other words, it is such an action of the living powers as can subsist but a given time. But this is not the case with a gleet, which seems to take its rise from a habit of action which the parts have contracted; as they have no disposition to lay aside this action, it of course is continued; for, we find in those gonorrhœas which last long, and are tedious in their cure, that this habit is more rooted than in those which go off soon." Treatise on the Ven. Dis. art. Gleet.

It is, in many instances, precisely the same in leucorrhœa: the mucous membrane of the vagina may be irritated by a spontaneous inflammation; by mechanical agencies; by acrid substances; by morbid poisons; or perhaps by some sympathetic influence, so as to produce leucorrhœa. The irritating causes may nevertheless be altogether withdrawn; yet the surface which had for so long a time continued to produce the fluor albus, will from habit persevere in its production. Hence, the leucorrhœa of long standing is always much more difficult to overcome, than the one which is in its primitive and active condition. But this last species, it may be remarked, very rarely occurs, and is perhaps more common after gonorrhœa, than after any other cause.

Gardien seems desirous to establish a species of leucorrhœa, "purely local;" we have endeavoured to prove them all to be so: but in this effort he unquestionably confounds two distinct conditions of the mucous membrane of the vagina. He says, "The *acute uterine catarrh* is a purely local affection, and depends on a peculiar irritation of the genital organs. It offers four periods in its progress; the first is announced by an itching, at first slight, of the vulva and interior of the vagina, which is occasionally extended to the womb. The woman complains of a considerable heat in the vicinity of this organ; of a feeling of

dryness, which suspends immediately the secretion of the mucosities which lubricate the vagina, and of pains of the back and loins; the itching increases, and sometimes becomes insupportable. In some cases it augments the sexual appetite; if this disposition be yielded to, the disease is aggravated. This period is accompanied by frequent disposition to pass the urine."

"The second period, which takes place on the second or third day, is characterized by a serous discharge, not very abundant at first; this augments in quantity, and assumes a green or yellowish colour, varying in intensity according to the degree of irritation; the ardor urinæ becomes more fatiguing, the labia majora, the vagina, and sometimes the urethra, show signs of inflammation. Fever sometimes ensues; the pains, at first concentrated in the loins, sometimes extend to the groins, to the haunches, internal part of the thighs, and perineum."

"In the third period, which begins on the ninth or tenth day, the intensity of the inflammatory symptoms diminish; the discharge is still very copious; it successively becomes thicker and offers shades of colour, until it grows entirely white; then it soon diminishes, and the ardor urinæ suddenly disappears."

"The fourth period, which forms the passage to the chronic state, presents many irregularities; the discharge disappears for some time, and returns without obvious cause. That of which the matter is flocculent, or resembles glairy threads or jelly, is commonly most difficult to cure," p. 324.

We have made this long extract, concerning what the author terms the "*leucorrhée aigu*," to show, that he confounds almost all the discharges from the vagina under one general head; namely, "le catarrhe utérin;" than which there cannot well be a more obvious error: thus, the purulent discharge of gonorrhœa; the mere increase of the natural discharge, or the temporary augmentation of it, (which he considers either sympathetic or critical,) he classes under the same head, but looks upon them as constitutional. But a disease which he admits to be *local and acute*, and of which we have given his own account, he also makes a leucorrhœa; but to which it has not the slightest analogy, either in its symptoms, or in the method of cure; for the disease in question consists of a peculiar inflammation, and oftentimes an aphthous condition of part of the vagina, and of the vestibulum especially; and is properly a variety of the "pruritus" of authors. See section on Pruritus.

The discharge constituting leucorrhœa is declared by authors to proceed from the uterus and vagina. To determine this point,

[1] All that portion of the vulva, which is anterior to the hymen in virgins, and the carunculæ myrtiformes in those who are not, is called the vestibulum.

may not appear at first sight to be of much consequence; yet the practitioner may find it of great use in making his prescriptions; for the remedies which may be found useful in the one instance, may fail altogether in the other. We are of opinion, that this discharge rarely proceeds from the cavity of the uterus, even in its most aggravated form; and when it does, it must always be looked upon as the most difficult of management.

If Dr. Cullen's definition be admitted, leucorrhœa would be limited to the internal cavity of the uterus itself.

He says, "Every serous or puriform discharge from the vagina may be, and has been, comprehended under one or other of these appellations—leucorrhœa, fluor albus, or whites. Such discharges may be various, and may proceed from various causes, not yet well ascertained; but I confine myself here to treat of those discharges alone *which may be presumed to proceed from the same vessels which in their natural state pour out the menses.*

From this definition of fluor albus, it will be perceived at once that a pregnant woman cannot have this complaint; yet the fact is notorious, that all women, (or at least with very few exceptions, as far as our observations have extended,) have, during this period, a greater discharge from the vagina than when they are not pregnant: and many have not this discharge, as already noticed, but at such times. Now, the discharge which continues, and even increases during pregnancy, and that which only takes place at that period, cannot be leucorrhœa; or Dr. Cullen, confining this complaint to the "vessels, which, in their natural state, pour out the menses," must be wrong. Astruc, indeed, declares, he has seen both leucorrhœa and the menses flow at the same time.

"I conclude," says the doctor, "a discharge from the vagina to be of this kind, (namely, from the vessels which furnish the menses.) 1. From this happening to women who are subject to an immoderate flow of the menses, and liable to this from causes weakening the vessels of the uterus."

To this we would observe, that there is no natural connexion between the two complaints, as stated by Dr. Cullen; for our experience furnishes us with so many exceptions to this rule, that we cannot look upon them as necessarily associated: we have seen many instances of menorrhagia without leucorrhœa; and we have seen more cases of leucorrhœa without menorrhagia. Besides, the Doctor attributes this discharge following immoderate flows of the menses, to "causes weakening the vessels of the uterus." It is an evidence of weakened vessels, when they are forced to secrete a fluid of a colour and quality different from that of the natural, and at the same time very much more abundant. Is not secretion an action; and if that action produces a greater quantity of a material, than it does when it is acknow-

ledged to be in health, would it not seem to imply an increase of power, rather than a diminution of force? What would seem to be the natural consequence of a weakened state of the uterine vessels, or any other vessels in a state of weakness? Certainly, that they must perform a lesser, instead of a greater duty.

If the vessels of a part are really weakened, it seems to follow, that less exertion can be expected from them than when in a state of health and vigour; yet, agreeably to this doctrine, they perform more than in that state of vigour, because they are weaker, and (as we should think) less able to do so. It would also appear, that when vessels were really weakened, they would be less able to transmit their contents; yet more is poured out—first, in the form of blood, as in menorrhagia; and then of an elaborated fluid, called fluor albus; for elaborated it really is; yet these vessels are said to be weaker than in a state of health.

But would it not seem to be a natural effect, if the vessels of a part be preternaturally weak, that the loss of several ounces of blood immediately from them, would increase this weakness? Yet, so far is this from being the case, agreeably to the scheme of Dr. Cullen and many others, that they must be strengthened; since the fluid they evacuate is more elaborated, and in greater quantity, than in a state of health. Will any one declare the vessels of the kidneys to be in a state of weakness in diabetes, because they yield quadruple the ordinary quantity of urine? Will any one say that the salivary glands are in a state of weakness, because they secrete a superabundant quantity of saliva, under the action of mercury?

But Dr. Cullen does not stand alone in this assumption; for most of the writers upon the subject have yielded to the same erroneous opinion; thus, Chambon, Denman, Leake, Vigarous, Gardien,[1] Capuron, Burns, &c., all talk of debility, either local or constitutional, as the cause of leucorrhœa. Even Mr. Clarke, who has written so ably upon several of the complaints of females, joins in the same belief.

Mr. Hunter says, that "the term weakness gives us no idea of a disease: and, indeed, there is none that can be annexed to the expression. By mechanical weakness is understood the inability to perform some action, or sustain some force. By animal weakness the same thing is understood: but when the expression is applied to the animals performing an uncommon or additional action, I do not understand it." Treatise, art. Gleet.

"2d. From its appearing chiefly, and often only a little before, as well as immediately after, the flow of the menses."

This will certainly prove nothing in favour of the position of

[1] Gardien, it must be observed, has scarcely done more than given a literal translation of a great part of Cullen's chapter on this subject.

Dr. Cullen; for, though we admit it to be a fact, in many instances, that the discharge is increased "a little before" the appearance of the menses, it is not always the case immediately after; though, if it were allowed to be precisely as stated by Dr. Cullen, it would not confirm his doctrine, nor militate against the explanation we shall give of that phenomenon.

It is admitted by all, be their theories of menstruation what they may, that there is more blood invited to the uterus and its dependencies at the time the menses are about to be secreted, during their secretion, and immediately after, than at any other period, except when this organ is in a state of gravidity; it will not then be disputed, that this increase of blood is intended to furnish the menstruous fluid; and that this process is effected by an increase of action in the vessels of the uterus. Now, when the vessels of the uterus and vagina are more abundantly supplied with blood, it is more than probable that the vessels on the secreting surfaces of these parts will be urged from this stimulus to greater duty; and consequently, made to furnish a greater supply of the fluid they are in the habit of eliminating; and, hence, the appearance and sometimes increase of this discharge.[1] This will therefore account for the fluid being more abundant just before the menses appear; and a continuation of this action, (which it is nowise doubtful sometimes exists,) after the menses have been poured out, will account for the fluor albus, or an increase of discharge at this time. For it may again be proper to observe, that the engorged state of the vessels of the vagina during pregnancy, produces very often the same consequences; when it is every way certain, that this discharge cannot be furnished "from the same vessels which, in their natural state, pour out the menses."

"3d. From the flow of the menses being diminished, in proportion as the leucorrhœa is increased."

Were this statement a fact, it would not interfere in the least with an explanation that is easily and well ascertained to have this effect in other portions of the body; namely, that the congestive state of the uterine vessels, so essential to the production of the menses, are relieved, to a certain extent, by the continual drain of fluids from the vagina.[2] But the assumption of Dr. Cullen, that the menses diminish in proportion to the increase of

[1] Dr. Cullen himself tells us, par. 988, that "though the leucorrhœa depends chiefly upon the laxity mentioned, (of the extreme vessels of the uterus,) it may have proceeded from irritation inducing that laxity, and seems *to be always increased by any irritations applied to the uterus.*"

[2] Every body is familiar with the influence of drains of every kind in relieving local inflammation and congestion. It is upon this principle, that blisters, issues, and setons, are constantly employed, with so much success, in cases where this kind of counter-irritation is required, or even where it is desirable to counteract the waste from discharging surfaces, be these discharges sanguineous, serous, or purulent, or wherever situated.

leucorrhœa, is contradicted by all observation; for all writers declare that those women who are subject to menorrhagia are most liable to leucorrhœa. Indeed, he says himself, that it often follows or accompanies this complaint.

"4th. From the leucorrhœa continuing after the menses have entirely ceased, and with some appearance of its observing a periodical recurrence."

This statement appears to us to be conclusive against the Doctor's argument; for if the same vessels furnished both the menstrual and leucorrhœal discharge in the early part of life, why should these vessels be unable to furnish the menses in the latter part, if they are still as capable as formerly, of throwing out the discharge of fluor albus? It must, however, be remembered, that leucorrhœa is by no means so common after the cessation of the menses as before, unless there is some organic lesion of either the uterus or vagina; and when this is the case, every body seems to agree, that this discharge should not be considered as a genuine leucorrhœa.

"5th. From the leucorrhœa being accompanied with the effects of the menorrhagia."[1]

This is a most hasty and ill-founded conclusion; for hemorrhoids, a diseased liver, or diseased viscera of any kind; a sore leg, &c. &c., will have, after a certain time, almost every symptom described by Dr. Cullen as belonging to menorrhagia.

"6th. From the discharge having been neither preceded by, nor accompanied with, symptoms of any topical affections of the uterus."

Now, if this prove any thing, it should be the reverse of what Dr. Cullen seems to insist on, namely, that leucorrhœa "proceeds from the same vessels, which, in their natural state, pour out the menses;" for how a want of evidence of "topical affections of the uterus," should prove the identity of the vessels which furnish at one time the menses, at another the matter of fluor albus, is really beyond our comprehension. His seventh argument we shall not notice, as it has not the slightest bearing upon the subject.

[1] "When, in consequence of the circumstances, and the repetition of them, (the too frequent, and too abundant menses,) the face becomes pale; the pulse grows weak; an unusual debility is felt in exercise; when, also, the back becomes pained from any continuance in an erect posture; when the extremities become frequently cold; and when, in the evening, the feet appear affected with œdematous swellings; we may, from these symptoms, certainly conclude, that the flow of the menses has been immoderate, and has already induced a dangerous state of debility." First Lines, par. 973.

"The debility thus induced does often discover itself also by the affections of the stomach, anorexia, and other symptoms of dyspepsia; by a palpitation of the heart, and frequent faintness; by a weakness of mind liable to strong emotions from slight causes, especially when suddenly presented." Par. 973.

I have never been perfectly satisfied, but in three or four instances, of the very many cases of leucorrhœa which have been under my care, that the discharge in question proceeded from the cavity of the uterus.[1] In all these cases, the following peculiarities were present. 1st. During the night, there would be no discharge whatever; but upon rising, there would be a very abundant one, of a glairy, tenacious substance; sometimes mixed with some of a purulent appearance.[2] 2d. That during the day, when it did escape, it was always suddenly, and accompanied by a sensation of effort within. 3d. That when a piece of sponge was introduced into the vagina at night, with a view of determining the point, it was never found filled with the kind of matter that would very quickly issue when this was removed. 4th. All these cases I found to be incurable, though capable of some relief. 5th. All these women were barren.

These considerations make us believe, that fluor albus has its seat, for the most part, in the vagina. We believe, farther, that it is almost always local; but from the excess of quantity, or peculiarity of quality, the system frequently becomes involved. Mr. Clarke says, "The constitution is rarely affected in this disease; the action of the heart and arteries is not increased, and the functions of health are seldom interrupted." Vol. ii. p. 14. This statement is in entire conformity with my own experience, as far as regards the first, and sometimes the second stage, that I make of this complaint, as I shall observe presently; but in the third, the system suffers, in a greater or less degree, the same alterations which any long-continued irritation or excessive discharges of any kind produce upon it. The quantity of the discharge will almost necessarily determine in what degree the system at large suffers, or at least when this complaint is idiopathic; and such it almost always is. But when this discharge is purely sympathetic, the disease, of which it may be merely an anomalous symptom, must, in great measure, determine the degree of injury the system may sustain—as in cases of ascarides; hemorrhoids; prolapsus

[1] It will be seen, that I am not disposed to deny altogether, that leucorrhœa may occasionally have its seat in the uterus; I only wish to be understood, that I do not by any means think it as common as authors would lead us to suppose. Morgagni tells us expressly, he pressed from the orifice of the uterus a matter resembling that which the woman was wont to render from the vagina while living. But he also tells us of an instance, in which the matter was confined to the vagina alone; and which, he expressly states, had no higher origin than the vagina. Epist. xvi. art 47.

[2] "The uterus is lined throughout with a mucous membrane;" the "secretion from this membrane is permanent;" the mucus secreted by this membrane, "resembles, in consistence and appearance, the uncoagulated white of an egg, and does not differ from mucus in other parts of the body."(*a*)

(*a*) "According to the experiments of Mr. William Brande, mucus consists of albumen and soda."—Clarke on Diseases of Females, vol i. p. 15.—Am. Ed.

uteri, &c. &c., though it will be evident, that the two diseases will deteriorate the constitution faster, than either would alone.

But whether this discharge proceed from the uterus or vagina, or both, it is evidently maintained by some local, or, perhaps, specific irritation; but of the nature of which I am not prepared to decide; but its influence is evidently spent upon the vaginal lacunæ, or glands, which, in a state of health, furnish the moisture so important to this part. In my present consideration of this, subject, I would wish to be understood, not to include the discharge, which is symptomatic of some derangement of the proper substance of the uterus, or that which always accompanies a prolapsus of this organ: these will be treated of under their respective heads.

The idiopathic forms of this disease may be divided into three stages; each of which requires a little difference of management; in the first, or most simple form, the matter discharged is glairy and transparent; or resembling a thin starch made by boiling; this, from its tenacity, very often accumulates in considerable quantity within the vagina, and is suddenly discharged, from time to time, either by its own weight, or from some sudden exertion of the woman; especially upon stooping, or lifting a weight—this never becomes acrid, unless there is the most reprehensible neglect of cleanliness; nor, so far as I have observed, is the sanguiferous system generally implicated, though it may take place occasionally in women constitutionally plethoric, or very feeble, and where it is easy to suppose it might be called into action by a trifling irritation. But the irritation, or inflammation, which provokes this increase of discharge from these parts, is in common so local, and so mild, as to exert no influence whatever upon the general system. But this is not always so, as we have just admitted; especially if the system be easily brought into sympathy from local irritations: in this case, as we shall observe presently, the sanguiferous system will be found disturbed.

It is probable that this peculiar mucus may be furnished by the neck of the uterus alone: and, therefore, this first stage may consist of the inflammation of this part, since, agreeably to Mr. Clarke, this part yields a fluid differing, at least in sensible qualities, from that found upon the surface of the vagina. He informs us, that "the mucus secreted by the glands of the neck of the uterus contains less water than any other mucus in the body, approaching nearer to the nature of a solid than that of a fluid body; it is semi-transparent, and possessed of great tenacity; it adheres to the fingers like bird-lime." "These glands, (of the neck of the uterus,) in a state of health, perform the office of secretion in pregnancy only; or if, at any other time, the matter secreted is of a very different kind, so resembling common mucus, as not to be distinguished from it." Clarke, vol. i. p. 17.

In the stage now under consideration,[1] (namely, the first,) we sometimes find the discharge vary from time to time, without the woman being able to account for the difference of appearance: but these changes must have causes, however occult they may be: I think I have almost always traced them to some imprudence on the part of the patient; for, though the complaint is confessedly a troublesome one, it does not always challenge the attention of those labouring under it, sufficiently to secure their best aid in getting well of it—hence, errors in diet will be committed; costiveness permitted for a long time together; cleanliness will oftentimes be neglected; over exertions will be made, or a series of fatiguing duties will be submitted to, all of which will have more or less influence upon the parts concerned in the production of this discharge.

During the attempt to cure this complaint, every thing capable of increasing it should be carefully avoided; and the female will find her best interests involved in the most strict conformity to the physician's directions for this purpose; while on the other hand, the physician will find it best to be very particular in his inquiries respecting the quantity and the appearance of the discharge, as he can only prescribe with certainty and effect while his attention is directed to these points. It is but by the uniform, or varying appearance of the discharge, that he can determine the actual state of this disease; whether his remedies are acting according to his intentions, or that he can be led to suspect a want of fidelity to her own health, on the part of the patient.

It is possible that the inflammation, (or perhaps only a form of it,) which gives rise to the first stage of fluor albus, may be confined to the neck of the uterus alone for a considerable length of time; but if it be suffered to remain unheeded, it will sooner or later, and in different degrees, involve the surface of the vagina. Or the inflammation may suffer various degrees of inten-

[1] It has been thought by some, that the difference in the appearance of the discharges in leucorrhœa, and from which we derive the stages into which we have divided this complaint, did not indicate the degree or the inveteracy of it; but rather determined the part of the genital system which furnished it, or the specific nature of the inflammation that produced the matter discharged. Thus, Chambon[i] thinks, when the discharge is green, that it proceeds from "une disposition prochaine au scorbut, qui ont un vice dartreux ancien, ou scrophuleux ou érésipélateux." But the various shades of colour which this discharge assumes only manifest the intensity of the irritation. Notwithstanding we have divided the complaint into three stages, because, in general, when left to itself, it goes regularly through them, yet the force of the irritating cause may be so very great, as to make the first discharge observed by the woman of the quality of the third stage. We have seen this in a number of instances; but we think it has almost always happened after some severe mechanical injury done to the vagina: hence it is more frequent after severe labours.

[i] Vol. ii. p. 112.

sity, while its location is confined to its original seat, namely, the neck of the uterus.

It may look like a gratuitous assumption to those who make leucorrhœa consist solely in a "weakness" of the uterus and vagina, to declare, that in the first stage of this complaint, an inflammation really exists in the neck of this organ. But such is the fact; at least so far as certain phenomena, without the aid of ocular demonstration, will warrant such a conclusion. In the first place, it seems that the quality of the natural secretion of this part is altered;[1] for from being of extreme tenacity and considerable density, it becomes less tenacious, transparent, and thinner; in the second, that still farther changes can be imposed upon the discharge by such causes as are calculated to augment the general action of the system, or to increase local determination;[2] in the third place, when this part is touched, and even this not rudely, pain is invariably produced;[3] in the fourth place, that parts both adjacent and remote are frequently brought into sympathy from this condition of the neck of the uterus;[4] and in the fifth place, the remedies found most effectual for the removal of the complaint, are opposite in quality to those which would be employed, did the discharge in fluor albus depend upon weakness.[5]

[1] It has just been declared above, that the natural secretion of the neck of the uterus, was "semi-transparent, and of great tenacity; adhering to the fingers like bird-lime." It seems, then, the first degree of morbid change alters the secretion to one that "is glairy and transparent, or resembling a thin starch made by boiling." A greater degree makes it "opaque, and of a perfectly white colour; and it resembles, in consistence, a mixture of starch and water made *without heat;* or thin cream; it is easily washed from the finger after an examination, and it is capable of being diffused through water, rendering it turbid."—Clarke on the Diseases of Females, vol. ii. p. 5.

[2] An attack of fever, high living, excess of venery, exercise carried to fatigue, intemperance in drinking, over stimulating injections, excessive costiveness, an attack of hemorrhoids, and approach of the menstrual period, will each occasionally increase the irritation at the neck of the uterus.

[3] "A morbid state of the glands in the cervix of the uterus, probably gives rise to this discharge; at least, the cases in which it comes away, are those in which the symptoms are referred to this part, and when pressure is made upon this part, under such circumstances, the woman complains of considerable pain."—Clarke on the Diseases of Females, vol. i. p. 37.

[4] A pain in the small of the back is almost sure to attend a morbid condition of the cervix uteri, as in cancers, ulcers, lesions from rude delivery, or the incautious use of instruments. The bladder is frequently urged to discharge itself, and a numbness is felt down the thighs.

[5] Mr. Clarke makes two species of "the transparent mucous discharge;" the first is that which originates from, and is accompanied by, increased action of the vessels of the parts. The second, that which originates in debility; in which latter case, the former may terminate.—Clarke on the Diseases of Females, vol. i. p. 300.

It will be seen, that we acknowledge but the first of these as an original disease; and that when the inflammatory stage is subdued, and the discharge continues, it then becomes "the leucorrhœa of habit;" which almost always takes place before the cure is completed.

Method of Cure of the first Stage of Leucorrhœa.

The cure should be commenced by directing the parts to be regularly washed with warm water, three or four times a day—if the patient be plethoric, I cause her to be well purged; confine her to milk and vegetable diet; and sometimes order her to lose blood[1]—when the pulse is sufficiently reduced by these means, or if the pulse be in a proper condition without them, I exhibit the tincture of cantharides; of this I direct thirty drops every morning, noon, and evening, in a little sugar and water; increasing the dose every third day, five drops at a time, until strangury[2] is produced, unless the disease is arrested, which is not unfrequently the case before this symptom appears. Should the complaint withstand the first strangury, I am not discouraged, but recommence the tincture at the original dose of thirty drops, and increase it as before, until a difficulty in making water is again experienced—it rarely, however, withstands the second irritation of the bladder.

Astringent injections are employed as soon as a change is observed in the discharge; that is, by its becoming thinner and more abundant, *but never until then*, should this require three or four stranguries to effect it. The best kind of astringent injections are the acetate of zinc, in the proportion of five or six grains to the ounce of water, or the sulphate of copper in solution, in the proportion of a scruple to half a drachm to eight ounces of water; either of these may be employed three times a day, taking care to wash out the vagina with soap and water previously.

During the treatment of leucorrhœa, too little attention is commonly paid to cleanliness; if this necessary act be neglected, as reprehensible as it generally is, very little good will be derived from the prosecution of the best plan of cure. On this account, we importunately urge the compliance with the direction of frequent washings with warm water, as well as the cleansing of the vagina, by throwing up it several syringes-full of warm soap

[1] It may be well to observe, that a strict antiphlogistic plan is constantly pursued during the cure of either stage of this complaint, until we are assured the discharge is maintained by habit.

[2] I always direct my patient to desist from the use of the tincture, as soon as she feels the approach of strangury, and not to resume it until all uneasiness disappears. If the strangury be severe, the free use of flax-seed tea, barley water, or gum Arabic water is directed—to take five and thirty drops of laudanum, and go to bed. Should this not succeed, an enema of a gill of thin starch, a tea-spoonful of laudanum, and thirty grains of finely powdered camphor must be given—so far as I recollect, this enema has never failed. It may also be proper to mention, that the tincture of cantharides I employ is fifty per cent. stronger than the ordinary tincture of the shops; or, in other words, where they use two drachms, I use three for making the tincture.

suds; especially before the injections, intended immediately for the complaint, are administered. By this plan, two important objects are gained; first, the matter occupying the vagina is removed, frequently; and thus is prevented all the injuries that might arise from its stagnation; secondly, the surface of the vagina is deterged by this means, and the medicated injections have full opportunity to exert their influence upon the inflamed surface that furnishes the discharge.

It is also difficult to secure compliance, as regards diet and drinks—the patient, her friends, and, perhaps, the physician, declare the disease to be a disease of "weakness;" one which requires tonic and stimulating remedies for its cure; hence, the most stimulating and nutritious articles of diet are generally had recourse to, to the manifest injury of the patient.

We have never witnessed an instance of the first stage of this complaint, attended by such a degree of debility as would require either tonics or animal diet for its relief. Mr. Clarke has fallen into an error upon this subject, at which we are not a little surprised; especially, as his general view of the disease is correct and well founded.

He says, "The food should be of the *lightest kind*, such as *animal broths and jellies;* vegetable jellies, bread properly fermented and well baked."[1] This selection of food seems in direct variance with his opinions of the complaint, for he has declared the neck of the womb to be in a state of inflammation; and has also said, "that if this disease arises from inflammatory action, this must be removed before any endeavour to restrain it is employed; for as the discharge during its continuance lessens the disease which occasioned it, it should not be checked until such inflammatory action is diminished."[2] Yet he advises "animal broths and jellies" during the inflammatory stage of this complaint; than which nothing can be more contradictory.

He appears, however, to look upon the modifications of animal substances to do away their specific nutritive and stimulating qualities; for in the very paragraph in which he advises the use of "animal broths and jellies," he tells us, "it will be better that the patient should not eat solid animal food until the powers of the stomach are, in some degree, restored." Now, it is very well ascertained that the stomach will almost always better assimilate small quantities of solid animal food, than the preparations he has recommended. But "when the powers of the digestive organs become more vigorous, recourse may be had to animal food;" and this is not all, for he also says, "Wine, either pure or mixed with water, as may best suit the palate or the stomach, may be allowed in moderate quantities."[3] The medical treatment con-

[1] Vol. I. p. 316. [2] Ibid. p. 34. [3] Ibid. p. 16.

sists of the exhibition of the various tonics, both vegetable and mineral. We are not acquainted with the agency that a difference of climate, constitution, and mode of life may have, to render the above plan successful in the part of the world in which Mr. Clarke resides; but certain it is, we could not succeed with such treatment in this country, even in those cases where debility might appear to be the most certain of the causes which produced the disease in question.

It is true, that the view Mr. Clarke has taken of this complaint, in the instances for which the above plan is recommended, would certainly justify the treatment recommended, were it a true one, namely, that it is a disease of "weakness;" but this character of the disease is the debateable point; and here we are unfortunately at issue—he believes in the existence of the complaint from "weakness;" we declare, that until it becomes the "leucorrhœa of habit," local inflammation is always present; and that with this state of the neck of the uterus the system at large sometimes sympathizes so much as to require strict attention to be paid to its condition; and that this condition requires, for some time, depletion and antiphlogistic regimen. But notwithstanding this, we will not say that Mr. Clarke has not met with cases to justify the mode of treatment he recommends; we mean merely to insist that we have never met with a case, where the antiphlogistic plan was not necessary, when there was evidence of this inflamed condition of the neck of the uterus.

But what is still more surprising, Mr. Clarke declares in another part of his work,[1] that "in ordinary cases, the most successful mode of treatment is to take away some blood, either by cupping or by leeches applied to the groin or to the back; and it may be necessary to repeat the local bleedings several times. If sympathetic fever be present, it will be prudent to open a large vessel, but this is seldom necessary, and all useful purposes are answered by local blood-letting."

It may not be thought amiss to repeat, that where there is evidence of this condition of the neck of the uterus, it must be met by blood-letting, purging, and low diet. It must, however, be admitted that the degree of inflammation is rarely so high as to require a repetition of blood letting, either general or topical. The low-seated pain at the very bottom of the back, pain within the vagina upon sitting down, together with a somewhat severe irritation about the neck of the bladder, with frequent desire to make water, though very strongly characterizing the disease in a certain stage, are but rarely met with.

It is a circumstance worthy of remark, and one every way calculated to confirm the correctness of the pathology adopted

[1] Vol. II. p. 24.

of this complaint, that the discharge successively alters its character as the disease diminishes by the successful application of the remedial means. For as the pain and inflammation abate, the discharge becomes thinner and more transparent, and if the cantharides have been successful, nothing but the natural discharge of the part is discovered to issue from the vagina.

In this stage of the complaint, medicated injections are not always necessary; for after the system will bear with profit the tinctura lyttæ, it for the most part soon puts a stop to the discharge. Should the discharge, however, be copious and obstinate, after it has become thinner, it is best to aid the cure by injections, provided it is not a young girl that is the subject of the complaint; or should the discharge resume its late appearance, the system must again be acted upon by blood-letting, or a few repetitions of smart purging.

Exercise of a very moderate kind may be indulged in, but fatigue should always be very carefully avoided; passions or emotions of the mind should be guarded against, and venery very little indulged in.

In the second stage, the matter discharged has a white, yellowish, or purulent appearance—it is usually more abundant than in the first stage; and is constantly leaving the vagina by a uniform stillicidium. If proper attention be not paid to cleanliness, it may become offensive, or may even excoriate—this state is almost always accompanied with pain in the back, hips, and in the region of the pubes; the woman's complexion is generally sallow; and when the discharge is excessive, she becomes subject to a train of nervous symptoms, which are both troublesome to the patient, and difficult of management to the physician. This stage consists of an extension of the inflammation with which the first stage commenced; it has now spread to the vagina, the surface of which at this time principally furnishes the fluid that is discharged. The character of the fluor is also changed; it is now of a deep white, or yellowish colour, resembling thick cream that has stood some time.

The system is almost always distinctly involved in this second stage; for if the pulse be carefully examined, it will be found hard, wiry, and irritated—in this stage, as in the former, the most scrupulous attention to cleanliness is recommended—I purge most commonly; confine the patient to a vegetable diet; and sometimes bleed—I am sure, that in every stage of fluor albus, time is always saved, as well as a material point gained, by a brisk catharsis in the commencement of the curative plan; it should therefore never be neglected. When the pulse is in a proper state to bear the tincture of cantharides, it is to be exhibited as above directed; subject to the same restrictions and dis-

tinctions, but with this difference, that we may commence advantageously, in proper subjects, with injections; but they should be of the sedative kind; a weak solution of the acetate of lead is perhaps the best:[1] this may be used several times a day, preceded by the soap and water, as just mentioned.

In the third stage, there is an aggravation of all the symptoms of the second; the discharge is of a greenish colour, and is frequently tinged with blood. I consider both the last forms but exalted degrees of the first; that is, the inflammation is greater in their numerical order; in the last, therefore, we have more to contend with than in the second; and more in the second than in the first. It seems that this complaint, when neglected, is apt to run spontaneously through all these changes, and is truly one of the diseases which rarely cures itself. These changes are more certain and strongly marked in women who are a little advanced in life, than in younger subjects; and especially with those who have borne many children, and who are inattentive to cleanliness; and in such, it is also more difficult to remove.

It is thought by many that there is a risk in stopping this complaint too suddenly;[2] indeed, almost all the writers upon this subject may be considered as of this opinion. Yet our experience goes to prove that its effects upon the constitution are such as to render its cure a most desirable thing; for it not only does injury to the woman, but also to her offspring. The latter, indeed, are seldom other than puny, and not unfrequently die in early infancy. But it is not very strange, that the notion that there is danger in curing leucorrhœa should exist, since it is commonly thought to be critical or sympathetic. From an experience in many hundred cases, we have never known the slightest inconvenience to arise from the cure of this complaint; nor is it probable that any can arise, however inveterate the disease may have been; and for this plain reason—that in proportion to the duration of the disease, will be the difficulty of arresting it; and, agreeably to our own experience, this is effected always gradually; for it requires great perseverance to produce a change in the quantity discharged; the system becomes, in consequence, in every respect prepared for the change. So much is this the case, that we have never seen an instance of the sudden stopping of leucorrhœa when this complaint was of long standing; and in recent cases, nothing is to be apprehended from a speedy arrest of the complaint. But as regards the cure, the same general directions are applicable to all the stages. Nothing can compensate

[1] The solution of the sugar of lead should not exceed a scruple to eight ounces of water.

[2] Mr. Jewel speaks of metastases to the joints in this complaint from having this discharge too suddenly stopped. This we have never witnessed.

for the neglect of cleanliness—this must, therefore, be insisted on; the bowels must be purged; and as the system is more frequently and extensively implicated in this, than in the former stages, we are oftener obliged to bleed and to enforce a strict observance of a vegetable and milk diet. We may, as in the second stage, where the subject will permit, commence with the injections of a weak solution of the acetate of lead; then perseveringly employ the cantharides—in using it in this stage, I depart from the method just recommended, if the disease be of long standing, by more gradually increasing the dose, or making the intervals of increase two or three days longer. My reason for this is, that the system may not too suddenly be affected by it; for I have observed, that when strangury is hastily induced, the effects are neither so satisfactory, nor so permanent, as when more slowly brought on—I may, however, remark in general, that the more susceptible the system is of the influence of this medicine in moderate doses, the more easily the cure is accomplished.

In this stage, as on the other occasions, I do not use the astringent injections until the sign for their employment shows itself; that is, an increase and thinning of the discharge.[1]

Even the first injections of this kind should be rather more feeble than those formerly directed; but the strength must be increased as the parts become more accustomed to them. I go on again and again, to renew the strangury, should the first not be sufficient. Nor am I discouraged, if the complaint does not yield to several: for I am very rarely disappointed in the operation of this medicine, when sufficiently persevered in.

I confess, however, that I have occasionally found the cantharides unsuccessful; but cannot this most truly be said of every known remedy? I have now and then succeeded with the balsam copaiva, after the other has been fully tried without advantage; and I have also effected cures in some obstinate cases, by the use of alum and nitre—five grains of alum, and ten of nitre, given three times a day, have proved very successful after other remedies have failed.[2]

In a late work, (1830,) on the subject of leucorrhœa, by Mr. Jewell, the solution of the nitrate of silver, applied to the neck of the uterus and vagina, by means of a piece of sponge, canula, or syringe, is highly spoken of. He commences with a solution of two or three grains to the ounce of water, and gradually in-

[1] Dr. Hunt, as quoted by Dr. Churchill, says he has cured leucorrhœa by giving two grains of capsicum, morning, noon and evening.

[2] We are aware that this is an unchemical mixture; but at the same time we must observe that these unchemical compounds have furnished us with some of our best remedies; witness the acetate of zinc when prepared by mixing a solution of acet. plumb. and sulph. of zinc. This is truly an unchemical mixture,—but every body that has tried it as a collyrium, in certain stages of ophthalmia, is satisfied with it.

creases it to four or five grains, as the parts become accustomed to its action. It is to be used three times a day, unless it produce too much pain—in which case it is to be reduced in strength, or wait until the irritation cease.

In the use of this remedy, care must be taken to guard against its stain, which is indelible. This will be best obviated by the patient guarding herself as if she were labouring under a catamenial period; or by wearing, during its use, black muslin or calico shifts. The sponge appears to be the least exceptionable mode of using this solution; this is done by saturating a piece of this substance of sufficient size to be retained after being well imbued, with the solution—this is to be renewed three times a day. Or the curved pipe syringe may be employed three or four times a day, unless it irritates too much—a sensation of warmth after its use is rather to be coveted.

He appears to have ill-founded prejudices against the employment of cantharides. He also recommends the tincture of iodine in small doses; but he has not produced any indisputable evidence that it has been useful. He appears to have adopted all the principles and opinions contained in this chapter, and though he makes respectful mention of the author, he gives him no credit for his opinions upon this disease, though all his distinctions, and plans of cure, are identical with those contained in this chapter.

Mr. Graham recommends the sulphate of zinc in this disease —three grains of the sulphate made up with common turpentine, three times a day, the dose to be increased if necessary. Edinb. Med. and Surg. Journ. vol. 26.

The discharge which attends the prolapsus uteri is owing altogether, or at least in great part, to the mechanical irritation the surface of the vagina suffers from this displaced organ, and does not come under our present consideration.

The leucorrhœa of habit is sometimes more obstinate than any other form of this complaint; especially if it be of very long standing, and in persons beyond the middle period of life, and who are inattentive to cleanliness. It will, however, yield, for the most part, to the remedies already mentioned, if sufficiently persevered in; though it may require the exciting of strangury rather oftener. I have, in a few instances of this kind, used an injection made of two grains of corrosive sublimate to an ounce of water, with great advantage. It should be used but once a day, for the first two or three days; then twice a day for an equal period; and then three times a day, until heat or other signs of irritation be perceived, unless it has been previously excited. This irritation must be kept up for a week or ten days; it may then be followed by the saturnine injections.[1]

[1] The secale cornutum is recommended with great confidence in leucorrhœa, and also in gonorrhœa, both by Dr. Negri and Dr. Ryan. About five grains three

There is a discharge of purulent matter that has been considered as a species of leucorrhœa. It generally begins with pain about the region of one of the ovaria, and will continue for two, three, or four days; the abscess then discharges (for such it is,) and gives immediate relief; the patient will continue easy until there is a fresh accumulation of pus; this takes place, pretty regularly, every three or four weeks, then goes through the same process of ulceration and discharge. I have never found this complaint obedient to medicine; I have used an injection of the nitrate of silver, three grains to the ounce of water, which would moderate this discharge, but never subdue it; it sometimes cures itself. Dr. Churchill mentions a disease very similar to this, which he and some others call, "abscess of the uterus, ovary," &c., &c., and for which he says, (after the acute symptoms have passed away,) he applies a blister to the sacrum, once or twice, if necessary. This produces an immediate diminution of the discharge and a mitigation of suffering; but he says nothing of a cure.

Leucorrhœa proceeding from hemorrhoids, I believe, will admit of no relief, until the latter complaint be removed. The same may be said of the leucorrhœa arising from ascarides; this condition of the vagina, however, is chiefly confined to children.

CHAPTER V.—Sect. I.

OF THE HISTORY OF MENSTRUATION.

The diseases connected with menstruation are so important, that I have thought it best to premise them with a general history of this process, that the deviations from health should be seen in stronger contrast, as well as better understood.

The menstrual discharge may, with much propriety, be considered as peculiar to the human female; if there be exceptions to this rule, they are few, and but ill ascertained.[1] We are told that the female of a certain species of monkey is liable to it; but, perhaps, in no other way than the bitch, the cow, the mare, the female elephant, &c., are said to be; for these, in the time of heat, have sometimes a sanguineous discharge from the vagina. But this must not be considered as a genuine menstrual evacua-

times a day, is the average dose in these cases; they recommend its suspension, if it excite much pain. Of its utility in such cases we can say nothing from our own experience. See London Med. Journ. for 1834.

[1] "De tous les êtres vivans, la femme seule éprouve périodiquement une évacuation sanguine naturelle, et independante d'aucune alteration pathologique."—Frank.

tion, as it proceeds merely from the rupture or abrasion of some small vessel, during the excessive engorgement that is wont to take place in the vaginæ of these animals at such times. Besides, no moral end could be answered in the brute, as in the human female, by such a discharge.

Indeed some would deny the menstrual discharge to be an original function, even in the human female, as Roussel, and after him Emmet; that this evacuation is the result of the social condition of man, and not the consequence of organization. Roussel has endeavoured to prove this, by declaring that man, in a state of society, feeds more than is absolutely necessary for his exigencies; and that he becomes plethoric in consequence; and that this condition must be relieved by some artificial drain in the male, by hemorrhage from some part or other of the body; and, in the female, by the menstrual discharge.

He declares, "Que le flux menstruel, bien loin d'être une institution naturelle, est au contraire un besoin factice contracté dans *l'etat social*."[1] But it may be asked, what is to be understood by "l'etat social?" If it be declared, it does not express the condition of man in a state of refinement, it must be admitted to mean, man united by some social compact: yet, so far, wherever he has been found, we have unquestionable proof that women menstruate; notwithstanding Roussel declares, that the uterus of the Brazilian woman does not perform this function.

But, were this true with these particular women, (a circumstance much to be doubted,) it would be but an exception, and should not be taken, or rather mistaken, for the rule. Among all the aboriginal females of this country hitherto examined, no such exception prevails: yet, were this a design of nature, it might most reasonably be looked for among these varied, widely spread, and simple people.

Why this opinion of Roussel should have found abettors, it is difficult to say; since it has neither facts nor reasoning to sustain it. The hypothesis is founded upon circumstances totally inadequate to the effect—namely, "Les hommes resemblés ont toujours cherché à resserrer les liens de la cordialité dans les festins. La joie est plus vive, et les épanchmens plus tendres dans ces momens où la machine se remonte par une nouvelle nourriture: on est alors plus content des autres, parcequ'on est plus content de soi même; l'absence de soucis laisse alors à la nasure la liberté de jouir de tous ses droits, et même d'en abuser; car il arrive souvent que, ne démêlant plus la sensation des mets d'avec l'impression de la gaité, elle prend le change, et se surcharge d'alimens qu'elle croit encore necessaries, longtemps après que le besoin est satisfait."[2]

The consequence of these indulgences he supposes to be a

[1] Système Physique et Morale de la Femme, p. 113. [2] Ibid. p. 113.

plethora; and this plethora finds an abatement in the female by the menstrual discharge: and in the male, by hemorrhages from various parts of the body, according to the period of life; or if the hemorrhages do not take place, the consequences of the excess of blood show themselves in a variety of other forms; as affections of the chest, rheumatism, hypochondriasm, stone, gout, asthma, &c., &c.

It will be perceived that this doctrine is but a modification of the one long before promulgated by Galen—the only difference is that Galen thought women were ever subject to the menstrual discharge; and that a plethoric condition of the system was essential to its production: while Roussel supposes this plethora to be of artificial origin; and that the menstrual discharge is the fortuitous consequence, and intended to relieve the system from danger.

A few observations will be sufficient to destroy this curious and ill-established speculation. 1st. From no record of the history of the human race does it appear other than, that the female was always obnoxious to this discharge—thus, by Moses, it is distinctly stated to have obtained among the women of his time, and we have every reason to believe, as an arrangement of nature; so also among all the tribes of the most savage people. In this country, most abundant proof is given, in the journeys of Major Long, that the menstrual evacuation is a constant attendant on the females, and where they existed in the greatest possible simplicity. 2d. The cause assigned by Roussel, namely "plethora," exists where this discharge has been interrupted; and to recall the menses often requires the abstraction of blood and other debilitating remedies. 3d. This function is oftentimes performed with the utmost regularity, and in the accustomed quantity, where the most decided debility prevails. 4th. That this discharge is *certainly* prevented, however long and regularly it may have been established, by the removal of, or from the diseased condition of the ovaries. 5th. That an abstraction of blood just before the period, or at any other time, does not prevent it.

Besides, very many, indeed all the mammiferous animals, have at certain periods a discharge from the vagina, which is either essential to fecundation, or gives evidence of the capacity for, or of the desire of, the animal at that moment to be impregnated; and this discharge is sometimes coloured, accidentally, as observed above, but not necessarily; and that this evacuation is, in some manner, connected with impregnation, is evident, since it never appears, in its healthy condition, but at the periods when the animal is capable of fecundation.[1] It is equal-

[1] Frank appears to be of a different opinion upon this point; he says that na-

ly certain that the human female is also capable of being impregnated after each healthy menstrual period. But this must be taken with some modification. It is every way certain there are women that are sterile with every mark of complete development of the organs, as far as function is concerned, and as far as can be detected by the eye or the knife of the anatomist. Yet some imperfections must exist, for fecundation or the formation of healthy ova is the natural arrangement; but the product of the ovaria is not always in a condition to profit by the application of the male semen: the woman remains barren for life. But when these failures take place, can we be certain that the male is not in fault? We know this to be so in some instances. We have more than one instance where the woman remained barren with one husband, to become a widow, and prove prolific after a second marriage.

Nor is this discharge in the brute a mere increase of quantity of the ordinary secretion of the parts—it differs essentially from it, at least in its sensible qualities; as is made evident to the discriminating olfactories of the male.[1] Thus it would appear, that nature intended some end should be answered by this peculiar condition of even the brute; is it not, then, equally certain, a similar end is answered, in the human female, by the menstrual evacuation?

Again, this discharge commences only when the female is in a condition to meet and overcome the ordinary contingencies of impregnation and delivery.[2] Now, were this merely a fortuitous discharge, why should it occur only at the period at which the female can propagate her species, and always at a certain period of female life? For I must protest against the opinion of Roussel and some others, who suppose impregnation may take

ture has subjected the females of all well-organized animals to this menstrual tribute, but that she does not always require it with the same rigour; that is, under the penalty of sterility." Now we think Dr. F. has assumed rather too much in his hypothesis; first, because there are sterile animals, and we believe they are only so in the absence of this sign of coalescence; for it is constantly the practice of breeders of animals, to wait for all evidence of heat before they are subjected to the male; secondly, because it is notorious that animals do not conceive if put to the male or entirely refuse him, if this modification of the menses be not present; thirdly, he is certainly of opinion, from his own words, that it is, for the most part, an essential to generation; and, therefore, must, as a general rule, have been intended for this purpose; and consequently, if impregnation do take place, and this discharge be absent, it is only an exception to the rule with such animal, and, in this respect, is like the human female; for he declares that this has taken place in females so circumstanced, and, therefore, is as much a law with the one as with the other.

[1] "In some animals, the reproductive liquid communicates to all the other liquids a strong odour, which causes both this species and the sex to be easily distinguished." Walker on Intermarriages, p. 40.

[2] Mr. Bourne, a respectable and intelligent South Sea missionary, when asked by Mr. Roberton, "Have you observed that early marriages (giving the ages at

place before the menstrual action has been awakened, or after it has become dormant.[1]

That impregnation has taken place before there was a coloured discharge from the vagina, and even after it has ceased, I am every way willing to admit; but neither of these circumstances proves the absence of the menstrual action, or that action which only exists during the integrity of the ovaria, but which ceases, or never takes place, when these bodies are imperfect; and which action is essential, either directly, or indirectly, to impregnation.

Roussel[2] declares menstruation to be "less a cause than a sign of fecundity." In this I agree: for the menstrual action cannot be a *cause* of fecundity, since this capacity is known to depend upon the ovaria. Yet it is every way essential to propagation, that the internal secreting surface of the uterus be in a healthy condition, and this manifested by a healthful catamenial discharge; or, in other words, only when the quantity and quality of the menses are free from objection, and the ovaries, at the same time, in perfect health.

Sect. II.—*Causes which may diminish capacity, &c.*

It may, therefore, be considered as highly probable, that the absence of the capacity to be impregnated, will sometimes depend upon the imperfect condition of either the uterus itself, or of the ovaries. If the former, it may consist in some derangement of the secreting surface of this organ; for though there may be a regular discharge of a coloured fluid, and this so nearly resembling the perfect secretion as to deceive the senses, it may yet want an essential condition or quality, and thus entail barrenness—hence, all women are not fruitful who may have a regular catamenial discharge; though, as far as can be determined by appearances, this discharge is every way healthy, and, at the same time, the ovaries free from fault.

Nor is it, perhaps, difficult to explain, or rather to imagine, how this may happen. I adopt the opinion that the menstrual

which they occur) are generally soon productive?" answered, that in very early marriages several years elapsed. In this Mr. Ellis, the celebrated missionary, concurred.—*Mr. Roberton on Menstruation, Edinburgh Medical and Chirurgical Journal for October*, 1832.

This would seem to prove the position laid down in the text. For it was long since observed by Mr. John Hunter, that when a woman begins to breed at an early period, as at fifteen, and has her children fast, she seldom breeds longer than thirty or thirty-five; hence we may suppose either that the parts are then worn out, or that the breeding constitution is over. If a woman begins older, as at twenty or twenty-five, she may continue to breed to the age of forty or more."—*Phil. Trans. vol. lxxvii. p.* 233.

[1] Does it not seem extraordinary that the plethora of Roussel should not exist until a certain period of life, (puberty;) and this period uniformly modified by climate, &c., or that it should not take place after another certain period of life, (after the cessation of the menses,) to maintain this discharge?

[2] Page 117.

discharge is a genuine secretion, and that the internal face or lining of this organ is the portion which furnishes it; now, it will be evident, that whenever this part is in any way deranged, the quality of its product must also be impaired; but the injury does not consist so much in the imperfect elaboration of the menstrual fluid, as in the inability of this surface to furnish a healthy decidua after impregnation has taken place; for there can be little doubt but that the same apparatus furnishes both one and the other. This condition of the uterus, I have reason to think, is not of unfrequent occurrence: an ovum may be fecundated, and duly conveyed to the cavity of the uterus; but it perishes there, from the want of a healthy decidua: it is, therefore, cast off unperceived at the next menstrual purgation; and thus the woman is relatively barren.

What strengthens this opinion is, that this lesion of the uterus is frequently repaired, by either proper remedies, or by the powers of the system alone; and the woman afterwards becomes fruitful. I am fully persuaded I have witnessed a number of such cases.

If it depend upon an imperfection of the ovaria, it may not, perhaps, admit of relief. The diseases of the ovaria may consist, 1st, in their imperfect development; 2dly, in derangement of structure; 3dly, in a want of healthy organization of the ova themselves. Now, either of these conditions of the ovaria may be so complete as to altogether destroy their influence upon the secreting surface of the uterus; the catamenial discharge may, therefore, continue, with all due regularity, and yet the woman may be barren; and, hence, this discharge cannot be considered, rigidly, as a constant sign of fertility.

Yet it may be safely admitted, as a general rule, that women who menstruate regularly and without pain, or the expulsion of coagula, or false membrane, are fecund; and that the reverse of these conditions is almost sure to be attended with sterility. It may also be observed, that we cannot attach much consequence to the quantity evacuated; for the woman who may evacuate double the quantity of another is not for this reason more certainly prolific. I have known a number of instances of repeated impregnations, where, as far as could be ascertained, not more than two ounces were habitually evacuated; and this not occupying more than a day and a half, or two days, for its elimination; while, on the contrary, I have known women who were barren, discharge three or four times this quantity; and the fluid bear all the sensible marks of a healthy secretion. From this it would appear, that mere regularity in returns; the elimination of a proper quantity of fluid, and this fluid apparently of a healthy character, do not always declare the woman to be fecund. Yet, when the woman has never menstruated, or when this discharge has altogether ceased, agreeably to the ordinary arrangement of

nature or from disease, she either never becomes impregnated, or ceases to become so, if she ever has been.

It is true we are told, as observed before, by highly respectable authority, that impregnation has taken place before the eruption of the menses,[1] as well as after their final cessation. The explanation of this seeming exception is not difficult, for the reason already assigned; namely, that because a coloured fluid was not observed, it was taken for granted that the uterus had never assumed the menstrual action, or had not resumed it after it had ceased as a law of the system.

Sect. III.—*Early Appearance of the Menses.*

Now, it is admitted by practical writers,[2] as a fact of no very rare occurrence, that the menstruous evacuation is sometimes serous, and this for several periods before the menstrual blood, properly so called, shows itself, to more decidedly mark the establishment of the process. This is especially the case with those who have this discharge to commence early.

And it may be well to caution the young practitioner against a common and natural error,—when this anticipating discharge takes place, not to mistake it for leucorrhœa, and attempt its suppression. We shall have occasion, in another place, to point out the influence of leucorrhœa upon the menstruous discharge. See Sec. on the Tardy Appearance of the Menses.

I was consulted, some months since, in the case of a young lady between twelve and thirteen years of age, who was labouring under a diseased spine, but who was also afflicted with headach, palpitations of the heart, and great sickness of stomach. She had also at somewhat regular periods a pain in the small of the back, with a bearing down sensation, a desire to pass water, an inclination to go to stool, &c. From these circumstances her mother concluded, and in this I concurred, that an effort was making for the production of the menses, though the common external signs of puberty were almost entirely wanting. I, however, requested the mother to be careful in examining the linen worn by her daughter at these periods, and ascertain whether there was not a discharge from the vagina resembling leucorrhœa. This was done: she reported there were considerable marks upon her linen; and this was observed for at least four

[1] Rondelet mentions a woman who was delivered twelve times; and Joubert another, who bore eighteen children, neither of whom had ever menstruated—*Gardien Traité d'Accouchemens*, Vol. I. p. 220.

[2] Gardien says, "Si quelquefois le sang sort brusquement sous couleur rouge, le plus constammant les regles commencement par un flux séreux et finissent de meme."—*Traité Complet. d'Accouchemens*, Vol. I. p. 238.

periods: after this the menses, with their usual appearances, were established, and continued with tolerable regularity up to the present time. This is the third instance I have witnessed of rather precocious menstruation in girls with diseased spines; whether there be a connexion between this affection, and the functions of the uterus, must be left to future observations to determine.

Thus, we see it is easy to err on this point with young girls, and to suppose they may have conceived before the catamenial period had commenced; nor is the error less liable to be made in those rare instances of impregnation, after the final cessation is supposed to have taken place; for in several well-attested instances of pregnancy at advanced periods of life, it was found, upon close examination, an effort had been made by the system to restore the catamenial flux by a periodical serous discharge.

In one case, which fell in part under my own notice, this effort was certainly made; but perhaps without the knowledge of the person concerned; yet it was sufficiently evident to the individual who washed her clothes, and who furnished me with the account; for it is presumable, with such evidence of returning youthfulness, she would scarcely have risked the consequences which followed her amour.

I was requested, in the month of March, 1795, to visit a young child, ill with the natural small-pox. At almost every visit I paid the child, I observed an aged woman much afflicted at its dangerous condition. Having an opportunity during the absence of this person to inquire who she was, I was informed, to my great surprise, that she was the mother of the child. I thought my informant was attempting to impose upon me, and told her so; but she seriously declared I might rely upon the fact. I was now informed that the mother of the child had never been married, and that she was in her sixty-first year when the child was born.

The case interested me much, and my inquiries became more particular; and from much conversation I learnt, that the old woman had ceased to menstruate at forty-five, but that about two years before the period of my attendance on the child, she (the nurse of the child, and the washerwoman of the mother,) had observed monthly evidence of a return of the catamenia; it was not much coloured, yet sufficiently so to excite attention. Now, this case would certainly pass for an instance of impregnation after the menses had ceased; and it must be admitted to be one every way calculated to mislead. I have therefore concluded, that the cases upon record, purporting to be of this kind, may have been similar to the one now related.[1]

[1] A case is related in the Edinb. Ann. Register, Vol. IX. p. 608, of a Mrs. Ashby, of Firnby, near Spilsby, who was delivered of twins in her fifty-fourth

So far, facts seem to oppose the idea, that impregnation can take place before the menstrual action has been established, and after it has finally ceased: let us now see if reasoning will not corroborate them.

It will not be disputed, that a part cannot perform its peculiar or appropriate action, until such part is completely developed, or its organization perfected; consequently the uterus will not be subject to the menstrual action, until the surface which furnishes this fluid is perfect in its arrangement; and not then, unless it receive the peculiar stimulus given by, or it sympathize with, the perfect ovarium, or ovaria. Now, by all we learn from either experiment or accident, it is certain, that the menstrual action is for ever prevented by the extirpation or destruction of the ovaria; consequently, this action is dependent for its existence upon a state of perfectness of one or both of these bodies.

It is equally certain, that if the ovaria be incomplete, they cannot furnish perfect ova, or ova capable of fecundation: nor can they give or excite that action which furnishes the menstruous fluid. If, on the other hand, the ovaria be properly developed, and the menstrual action does not take place, it is but reasonable to suppose, that some imperfection must exist in the uterus itself; and if this be admitted, it would seem to follow, that a perfect action cannot be expected from an imperfect organ; and it will be farther granted, that no process in the human system requires greater perfection of organs, than those subservient to generation.

Therefore, as regards the main point, it is unimportant whether the imperfection be seated in the ovaria, or in the secreting surface of the uterus; for, if it exist in either, coition cannot be entirely successful. If an ovarium furnish a perfect ovum, it may be fecundated, though the menstrual action had never taken place; but this is but one step in the march of generation; for if the ovum be not properly cherished after it shall have been deposited in the uterus, it will soon perish and be cast off. For, that it may be sustained and properly developed, it is essential, that the uterus produce the decidua; and that it cannot furnish this sine qua non, is highly probable, as the organization which is to yield it is the same as that which performs the menstrual secretion; and that this part is imperfect is put beyond doubt, since it has formed this fluid.

That impregnation may be successful, a healthy condition of the internal surface of the uterus is required, and a sound condition of at least one of the ovaria. For if these organs be imperfect, either fecundation cannot result, or it will take place una-

year; and Haller gives instances still more extraordinary—viz. one at fifty-eight, one at sixty-three, and another at seventy.

vailingly. Thus, if the ovaria, from disease or imperfection, cannot furnish an ovum that can profit by the application of the male semen, fecundation will not issue: if, on the other hand, the internal face of the uterus be diseased, and incapable of furnishing the decidua, the ovum must perish, though fecundated. It is, therefore, but reasonable to conclude, that if the uterus be not sufficiently developed to secrete the menstruous fluid, it must be imperfect; and if imperfect, it cannot perform what is essential for the preservation of the ovum after it has been placed in its cavity.

Fecundation, after the cessation of the menses, must be equally doubtful; since it is probable it would require a renewal of the menstruous action, that fecundation should be successful. At present we are not sufficiently acquainted with the conditions essential to this cessation; or, in other words, what changes take place in either the ovaria, or in the secreting surface of the uterus itself, when this period arrives. We only know it does take place; but how, we are altogether ignorant. The moral cause of the cessation is better comprehended than the physical.

It would seem but fair to conclude, that if the early part of female life requires a certain condition of the uterus and ovaria, to render coition successful, it would be no less necessary at the more advanced stage: I have attempted to prove this necessity; and the same arguments will also serve for the latter period. For, it is evident, that the ovaria and uterus must have suffered a change, or the woman would have continued to menstruate: now, it is of little moment whether the change occur in the uterus or in the ovaria; since a certain alteration in either will incapacitate the woman both for menstruation and conception.

It is, however, probable, that the ovaria suffer deterioration earlier than the uterus; as many women continue to menstruate regularly for a considerable time, before the final cessation, without conceiving. The ovaria may cease to produce ova to be fecundated; and the absence of this power may eventually cause the final departure of the menses; since they would be no longer necessary, or useful.

It is, also, probable, from impregnation now and then taking place long after the disappearance of the menses, that an ovarium may regain its productive powers, and furnish a new and healthy ovum; and when it does regain this capacity, the internal face of the uterus may reassume its menstrual action, and impregnation may, under such circumstances, be the consequence. But that it may be eventually successful, precisely the same condition of the uterus must exist, namely, the formation of the decidua; as when this process was successful in the earlier periods of life; for if this be wanting, the same consequences must necessarily follow as would then result.

It seems that the production of efficient ova is governed by some general law in each individual female; in the brute it is regulated with great exactness, as they have regular periods of salacity; and this salacity may depend upon the presence of a perfected ovum or ova. In the human female these periods are not so exactly limited, as individuals differ very much in their capacity to be impregnated; and each has a marked period, cæteris paribus. Thus, some women are impregnated every twelve or thirteen months; others are eighteen months or two years; while others enjoy much longer intervals.

I know a lady who conceived but once every seven years, and she bore four children at these intervals. I have known several to have a lapse of three years between each pregnancy, &c. It would seem, from these facts, that it requires a lapse of a certain period to perfect an ovum; and that this process is much more rapid in some instances than in others. But when the ovaria lose the power of furnishing ova, as at the cessation of the menses, impregnation ceases of course. The ovaria sometimes, however, regain the power, after it has been long lost, of furnishing healthy ova, or they become much more tardy in producing them, as a woman will have much longer intervals; or this may be accelerated, if she have been tardy; therefore, some women have their children at uncertain intervals; one lady with whom I was acquainted, had not a child until she had been married 19 years; her husband was a hale, hearty-looking man as one in a thousand. She never became impregnated again. And I have known more than one instance, where the lady had seven children in six years, &c.

Impregnation after the final cessation of the menses is of extremely rare occurrence, and should be ranked among those extraordinary instances, in which the system makes an attempt to renew certain lost functions, or to repair lost parts. Thus, the eye-sight has been restored, after having remained imperfect many years; the hearing, in like manner, has returned after long deafness; the teeth have been renewed after they have been many years lost, &c. Is it not then more than probable, that when such cases occur, all the functions ordinarily esteemed essential to this process in the early part of life, should obtain when it takes place after the menses have ceased? Now a healthy menstrual action is a sine qua non to impregnation, in the earlier parts of life; it would seem, therefore, to be indispensable to this end, at the latter period: and where impregnation has obtained, we cannot well question, but it has been preceded by this action.

Sect. IV.—*The time at which they appear.*

The period at which the menses make their appearance is variable; it is much influenced by constitution, climate, and mode of life. As a general rule, it takes place at puberty, or at that period at which the female is capable of propagating her species; and this period varies, as climate may differ.[1] They constantly, however, keep pace with the development of the body; where this is rapid, they will appear proportionably earlier; where this process is slower, they will appear later: but whenever the menses appear as regular evacuations, they mark the period of puberty; thus, in hot countries, women commence to menstruate at eight or nine years of age, and are not unfrequently mothers at ten.

In the more northern regions, as in Lapland, &c., this evacuation is generally delayed until the female has attained her eighteenth or nineteenth year; in the temperate latitudes, the average period will be found from the fourteenth to the sixteenth year. A difference will, nevertheless, be found in the women who may reside in cities, and in those who dwell in the country of each respective portion of the globe. It may also be observed, that in cold countries, women continue to menstruate for a longer period than in warm; for as a general rule, it will be found, they are obnoxious to this discharge, double the period that elapses before it commences. Thus, women who have not this discharge until eighteen, will be found to have it until beyond fifty; those who commence at fourteen or fifteen, will leave off at about forty-five; those who begin so early as eight or nine, will have it cease at twenty-five or six: "citius pubescunt, citius senescunt."

This fact appears to be disputed by Frank:[2] he "says that the early appearance of the menses does not hasten the period of cessation; for in the Milanese, where he practised ten years, this discharge takes place one or two years earlier than in Germany; yet it is no uncommon thing to see women perfectly regular at the forty-eighth or fiftieth year." This may be, and most probably is the case—but this account tells but the half that is necessary to the establishment of the law he lays down; for he has not declared that the females he found regular at forty-eight or fifty, had in every instance begun a year or two sooner than the

[1] We have heard of a lady, within a few days, who is now fifty years of age, who did not commence to menstruate until she was forty-five; then she menstruated regularly until the present time (Dec. 1840.) We know well a lady, aged twenty-three years, who menstruates but once in a year.

[2] Traité de Médecine Pratique, tom. 3, p. 397.

women of Germany, and which would be essential to the fact he thus attempts to prove.[1]

There are, however, a number of curious objections to the general rules we have attempted to lay down: these consist in the precocious appearance[2] and unusual protraction of the menses. Haller, Van Sweiten, &c., give instances of each kind. I have seen several cases where this discharge was regularly continued until the fifty-fourth or fifty-fifth year.[3]

Sect. V.—*Symptoms which announce their approach.*

This evacuation rarely fails to be announced by a variety of symptoms, of greater or less severity, or danger; among girls who have been delicately and luxuriously brought up, and who have their nervous system rendered morbidly sensible or vibratile, a great variety of nervous symptoms, as they are called, precede the eruption of the menses; such as ringing in the ears; a sense of suffocation; palpitation of the heart; starting from slight and sudden noises; precarious and whimsical appetite; loathings and cravings; convulsive twitchings; convulsions; chorea sancti viti, &c., all of which are sometimes instantly relieved by a trifling discharge from the vagina, and this not necessarily coloured.

The last mentioned circumstance must have been observed by every attentive practitioner, who may have had charge of

[1] We could record a number of instances where the menses were continued much beyond their ordinary period, and where, after ceasing some time, were resumed with their accustomed regularity; but we shall limit our observations to one case, and that because it is recent and well authenticated. This case is recorded in the *Ann. Univ. de Med.* A female aged ninety-four continued to menstruate from the fifty-third to the ninety-fourth year. Her relatives were remarkable for their longevity; she is at present in perfect health.—*American Journ. of the Medical Sciences for Feb.* 1831.

[2] There have been instances of the catamenia commencing soon after birth. An instance of this kind is given by Mr. Whitmore, in Med. Chirur. Trans. London, vol. 4th. This patient had the evacuation regularly from birth, at stated intervals of three weeks. In her fourth year she died after a very short illness. On dissection, an unusual development of the uterus, &c., was discovered. The other daughters of this family had nothing peculiar.

[3] The following table exhibits the ages of three hundred and twenty-six females, at which they began to menstruate. It is furnished by Mr. Roberton, in the *North of England Medical and Surgical Journal.*

In their 11th year,	6.	In their 16th year,	54.
12th "	12.	17th "	50.
13th "	31.	18th "	19.
14th "	60.	19th "	18.
15th "	72.	20th "	4.

To this list may be added the case related by Madame Boivin, in her account of a new cause of abortion. The subject of this case commenced to menstruate at seven years of age, and did so regularly after her tenth year.

females; and it is one worthy of note, as it goes to confirm what has been advanced above of the identity of the action which produces these fluids, though so different in their appearance.

The vascular system is sometimes also much disturbed: we often witness determinations of blood to various parts of the body; as to the head; the lungs; the mammæ; the stomach and bowels, &c.; for the relief of which, we are obliged to abstract blood, or employ other remedies, if a kindly discharge from the uterus do not quickly tranquillize the disturbed and embarrassed circulation.

Sometimes the inconveniences are confined to the genital system—in such cases, a sense of weight; bearing down: ardor urinæ; pain in the region of the uterus, &c., are experienced; all of which, for the most part, announce the approaching discharge.

It is at this period, also, that nature perfects her work, both as regards development and proportion; it is the period of the most perfect beauty of which the female is susceptible; it is the one at which the moral changes are not less remarkable than the physical; it is a moment, of all others, the most replete with consequences to the inexperienced and confiding female.

At this period a great variety of interesting and curious phenomena present themselves: the voice is found to change; the neck and throat to increase in size, and to become more symmetrical; the mammæ to swell; the nipple to protrude; the chest to expand; the eyes to acquire intelligence, and an increase of brilliancy; in a word, a new being, almost, is created.

The quantity of fluid expended at a menstruous period differs in different individuals; with girls who precociously menstruate, the quantity is in general smaller, and the returns less regular. Climate exerts an influence upon the quantity discharged, as well as upon the periods at which this evacuation shall commence. Thus, in the equatorial and more northern regions, it is less than in the more temperate climates.[1]

Sect. VI.—*Quantity discharged.*

A variety of causes, independent of climate,[2] are said to have the power of increasing the menstrual discharge; as all circum-

[1] Gardien, p. 227.

[2] Of this several instances have occurred, to prove that uterine development may be independent of the general influence of climate; for a case is mentioned, that in Kentucky a girl of eleven was safely delivered of a living child; the parent bore all the usual marks of complete development. And another instance has been communicated to me by Mr. William M. Egbert, in which a girl in New Jersey became a mother at twelve; and is now the mother of several other children.

stances suited to increase the activity of the system; and thus tend to its more hasty development. Such are the passions of the mind, frequently indulged in, as anger and joy; a diet rendered too stimulating by either spices or spirits of any kind. All such as would have a tendency to produce a plethora of the uterus, and thus increase its sensibility; as the frequent use of foot-baths, foot-stoves, &c., all such as excite a pruriency of the imagination; and lastly those which augment the quantity of blood, as too full a diet, especially chocolate as a constant article of food;[1] too long indulgence in feather beds, and the want of sufficient exercise.

It would be difficult to ascertain the exact quantity of fluid evacuated at each period, as it cannot be well subjected to measurement; hence the discrepancies upon this subject. Hippocrates set it down at twenty ounces; there can be no doubt but this is very much overrated; at an average, from four to six ounces may be considered as the proper mean. It usually employs from three to six days for its evacuation, and for the most part is extremely regular in its returns. I know a number of females who can tell not only the day on which it will return, but even indicate the hour at which it will show itself.[2] With other females, however, it is less regular: but it rarely exceeds the twenty-eighth day with such as are in good health, if we except when it approaches the period for its final cessation.

When the time approaches at which this evacuation is about to cease, agreeably to the arrangement of nature, this flux becomes more desultory, as regards the periods of return, and the quantity eliminated. The discharge may return every two or three weeks, or it may procrastinate until the fifth or sixth week, or sometimes even longer; and instead of the four or five ounces which were wont to be effused, twenty, or even more, may be evacuated. But it must be remarked, that when the quantity becomes so excessive, it is not a genuine menstruous product that is poured out—for this process is now accompanied by a true hemorrhage; as is evinced by the expulsion of coagula.

Sect. VII.—*From whence the menses are derived.*

From the last expression it may be collected, that I consider the menstruous fluid not as a pure or unmodified blood: I shall

[1] Almost all the French writers mention the influence of this article upon the genital system.

[2] A lady lately informed me she could, with the utmost exactitude, tell the day and hour at which this discharge would take place. This was made known to her by the appearance of certain feelings, which constantly took place one week, to the hour, before the eruption of her menses.

therefore state the reasons for this belief. 1st. Its colour is between the arterial and venal blood, being less brilliant than the former, and more florid than the latter. 2d. It never separates into parts; blood drawn or evacuated from any other part of a healthy body does separate in a short time into its component parts. 3d. It never coagulates, though kept for years: while other blood, when free from disease, quickly does when exposed to the influence of the air. 4th. Its odour is remarkably distinct from that of the circulating mass; and it is less disposed to putrefaction.

It has been supposed, because the menstruous fluid does not coagulate, that it contains no fibrine; but it is more probable that this substance has been deprived of the power of coagulation by being subjected to the influence of the vessels of the secerning portion of the uterus. This opinion is strengthened by recurring to the fact, that the coagulating lymph always accompanies the red globules, wherever the latter may be found.

The menstruous blood may therefore be considered as a substance differing from the blood of the circulating mass in at least two remarkable properties; namely, in not coagulating; and, secondly, in not separating into parts. It is true, there are many, of high authority, who declare a contrary belief. Hippocrates declares it to be pure blood; similar to that of a victim, if the victim be in health; and this opinion has been handed down to the present day, without being challenged by inquiry, or subjected to dispute.[1]

If mere blood were evacuated from the uterus at the menstrual periods, it would be, strictly speaking, a hemorrhage; but that this is not the case, the whole phenomena of this process seem to declare. I have stated, above, some reasons for my disbelief on this point; and shall now add, that had this operation consisted in the mere evacuation of unchanged blood, it would be attended by precisely the same inconveniences as almost always attend hemorrhage from this part; namely, pain of an alternate kind, arising from the contractions of the uterus to expel coagula which always form, and which require for their expulsion the efforts of the uterus.

It may also be added, that in cases of imperforate hymen, the accumulated menstruous blood constantly remains fluid, though a little thickened; and when relieved by an operation from its confinement, it is found to flow with considerable freedom from

[1] We believe we are safe, when we say, that a large majority of those who have written on the subject of menstruation, consider the menstrual fluid as a pure hemorrhagic blood; some few seem to agree to a modification of this opinion; but this does not amount either to a concession or denial of its being a secretion; of this number, are Bichat and Broussais.

the orifice made for this purpose. No coagula present themselves, as would be the case, were the fluid unchanged blood.

That the menstruous blood may contain all the constituent parts of common blood, I do not mean at present to dispute, since I am not prepared to say in how many or how few details it may differ, upon a strict analysis; it is sufficient for my present purpose to state, that it must experience some change during its elimination, as it is uniformly deprived of the property of coagulation when in a healthy state.

This last circumstance, from its uniformity, must have a meaning; I have just stated what I believe to be the probable intention of this change, namely, the comfort of the woman; but it may have a higher object: it may be essential to the propagation of our species. Certain it is, the sensible properties of this evacuation differ in certain individuals; and it is found, that when this discharge is very profuse or very sparing; when many coagula are thrown off; when it is thin and pink-coloured; when very black, and resembling, in some measure, coffee-grounds; or when it is discharged with pain, and accompanied by a whitish membrane, the women, so circumstanced, are constantly barren, so far as my observations have extended.

As I do not believe this discharge to be a mere exudation from the internal surface of the uterus, and constituting a genuine hemorrhage, it is proper to declare what I believe its real nature is. I look upon this discharge to be a genuine secretion, from the mucous membrane with which the cavity of the uterus is lined; since it would be difficult to explain, by any other process than some peculiar mode of arterial action, the change which evidently is wrought upon the coagulating lymph; and we know that this constituent of the blood is, in many instances, under the immediate influence of this set of vessels, as is proved in cases of scurvy; death from a blow on the stomach; a certain stage of yellow fever; small pox, &c.

In these cases, the blood loses the power of coagulation by some peculiar arterial action; and this, sometimes, in a very short time. The same effect is produced by the uterine arteries during the menstrual process; and this process may, with much propriety, be termed a secretory process.

The menstrual fluid has been considered as a secretory product for very many years, and this opinion is now adopted by many of the physiologists of the present day: thus, Haller, Bordeu, Sanders, John Hunter, &c., called menstruation, without hesitation, a secretion. It is perhaps, at the present day, impossible to say who first broached this doctrine. The credit has been given to each of the gentlemen just named, but not with justice, as I shall show immediately.

In Rammazini's "Essai sur les Maladies des Artisans," p. 214,

we find the following passage: "Il y a tout lieu de croire que le sang des regles a quelque qualité maligne et cachée; et on lui a donné à juste titre le nom de *secretion* et excretion." In this passage the word secretion appears to be familiarly employed, and was the one most probably used in common parlance among the medical men of the day.

Fourcroy, the translator of this work from the Latin, in a note to a part of the paragraph from which the above extract is taken, says, "Rien cependant n'etoit plus naturel, sans avoir recours aux phénomènes chymiques, que de concevoir le flux des regles, comme une secretion, qui a son organe, ses périods reglée, sa marche et son départment, ainsi que toutes les autres secrétions," p. 216.

From these extracts it is evident that neither of the gentlemen above mentioned is justly entitled to the honour of the suggestion, for the first edition of Rammazini's work was published in 1700. Indeed, it would seem, from the manner in which it is mentioned in this work, that the doctrine was not new at that time; at least there is no claim laid to originality by Rammazini.

Sect. VIII.—*The Uterus, is it lined by a Mucous Membrane?*

I consider the uterus to be lined with a membrane of the mucous class, as taught by Bichat and others, notwithstanding its existence has been lately called into question. In examining the latest authority on this subject within my reach, I find it doubtfully mentioned by Meckel, in his Manuel d'Anatomie, as translated by Jourdan and Breschet, vol. iii. p. 611. He says—

"La face interne de la matrice est tapissé par une membrane muqueuse rougeâtre, presque lisse, garnie seulement de villosités tres fines, qui se continue superieurement, et de chaque côté, avec celles des trompes, inférieurement avec celle du vagin. Dans l'état frais, cette membrane adhère d'une maniere si intime à la substance fibreuse sous-jacente, qu'on ne peut l'en isoler, quoique sa structure annonce assez qu'elle appertient à la classe des membranes muqueuses; mais, avec du soin et de precautions, on parvient à en detacher, quelques lambeaux, apres avoir soumis la matrice à la maceration."

"Son union intime avec le reste de la substance de la matrice a fait revoquer son existence en doute par plusieurs anatomistes."[1]

[1] "C'est l'opinion de Chaussier et de Ribes. Me. Boivin dit aussi n'avoir jamais apergu cette membrane muqueuse, et pense que la face interne de la matrice n'est formée que par l'extremité des vaisseaux exhalans qui s'y ouvrent. Une pareille explication est très vague, sinon même tout à fait unintelligible. L'Analogie, quand il n'y aurait pas d'autre motif que celui-là, ne permettrait pas de douter que la face interne de la matrice ne soit tapissée par une membrane."—*Notes des Traducteurs.*

It is truly a matter of surprise, that it should be questioned for an instant, that the uterus is lined with a membrane, and this of the mucous kind; for neither the authority of Morgagni, Boerhaave, nor Haller, all of whom Chaussier has called to his aid to support the opinion, can possibly alter the structure of this part; for a membrane is obvious to the eye; and when macerated, is tangible to the fingers, and the nature of its discharges proves it to be a mucous membrane. It has been thought by some to be of the deciduous kind, and regularly cast off after each delivery, or even after abortions. There is much reason, from the appearance of this part after delivery, to countenance this opinion—it, however, wants confirmation. But if this suggestion were admitted in its fullest extent, it would not militate against the presumption that it is a mucous membrane. For this membrane must be considered as possessing a considerable variety of function under particular circumstances: for mucous membranes are made to throw out, not only mucus, but pus, and even modifications of these substances.

It is, in truth, most intimately connected with the substance of the uterus, and cannot, perhaps, ever be separated from it in the recent and sound state. But this only proves the closeness of its connexion, and not its non-existence. Indeed, this strict union strikes me as highly useful in the economy of gestation: for were it loosely and uncertainly attached to the substance of the uterus, much inconvenience would necessarily result from the great distention this organ undergoes during pregnancy.

Upon opening an unimpregnated uterus, and viewing the cavity it presents, we are immediately struck with the smoothness and polish of its surface: now, it may be proper to ask, what is this whitish and shining surface which presents itself? Can it be the extremities of the exhalants of Me. Boivin? or the proper substance of the uterus, as insisted on by Chaussier? Will an arrangement like that of Me. Boivin, or Messrs. Chaussier and Ribes, secrete a mucous fluid; yield a fluor albus; or render a pus? Or, in other words, will any other surface, save a mucous surface, display the phenomena of a confessed mucous membrane.

The existence of this membrane is denied, because it cannot be separated from the substance of the uterus. And when it is urged that this can be effected by maceration, or incipient putrefaction, they declare the separated portion to be no membrane, but some accidental concretion. It is said by Chaussier and Ribes, that the membrane which lines the vagina terminates at the orifice of the uterus.

The quality of the menstrual blood has been a matter of much dispute with many of the writers upon this subject. It is by some considered perfectly innoxious, and by others as extremely deleterious. The ancients attributed to it the most baleful effects

upon both living and inanimate matter. Thus, Pliny declares the approach of a menstruating woman will turn new wine sour, render fruit trees sterile, or even destroy them; burn up the seeds and fruit of a garden, if she should sit near them, &c. &c.; while Fallopius, Rodrigue à Castro, Baillou,[1] &c., assure us, in its natural state, that it is perfectly free from all bad qualities. La Motte, though apparently willing to remove the imputation urged against the menstrual blood by Pliny and others, cannot altogether divest himself of the prejudices of the times and of education. He seems disposed, however, to compromise between the force of opposing facts, (which he confesses daily to have observed,) and the influence of names and of instruction, by relating, with great *naïveté*, the following story.

After having timidly attempted the refutation of Pliny and others, "that the menstrual blood is most injurious," he says, "But I see sufficient to make me apprehend the presence of a woman in this situation, especially if she have red hair. I had a servant of this kind. One day I gave a breakfast to a number of my friends; white wine is the kind which is usually preferred upon these occasions; especially if you intend to eat oysters; and mine was excellent; and was drawn by this servant. My friends expatiated upon the goodness of my wine. The next day I breakfasted in like manner with one of the friends who had been with me; but he had no wine but red; I immediately sent for some of my white wine; but it was found so spoiled as to serve for nothing but vinegar. The same servant aided in salting some pork, which was afterwards found to be spoiled; though the part which was salted by another person, in another cellar, was perfectly good." He adds, however, with his usual candour, "but I cannot say whether this may not have been the fault of the salt."[2]

It must be admitted that this secretion is acrid, occasionally, and will leave traces of its acrimony upon the parts over which it flows; but when this happens, it must be recollected that this discharge is in a deranged state, and no longer a pure menstruous evacuation. This occurs more frequently towards the decline, than in the early part of life; and especially if there be a tendency to cancer. It must, however, be recollected, that even in such instances, the general system is not contaminated in the commencement of this condition of the uterus; the acrimony of the discharge results from an altered action of the vessels concerned in the process of elimination, and its exposure to the air; and it is not until portions of this discharge are absorbed, or until the system at large sympathizes with the diseased parts, that any evidence of the uterine affection is betrayed by the skin or other portions of the body becoming decomposed.

The idea of the impurity of the menstruous blood took its rise

[1] Rammazini, p. 214. [2] Traité des Accouchemens, p. 57.

from the supposition that this discharge was intended to relieve the woman from certain noxious humours generated in her body from her sedentary habits, as well as other causes. Hence, so much dread was entertained, when this evacuation was interrupted from any other cause than pregnancy. But no alarm was excited when this flux was arrested by gestation; as it was then employed, they said, for the purposes of the fœtus, and they appear willing to think the embryo cannot be injured by it.

This opinion they thought was supported by the appearance of certain eruptions upon various parts of the body when this discharge was suppressed, and which yielded only to such remedies as restored this evacuation. But this fact, at the present day, would be explained upon very different views of the animal economy; and will no longer serve to support the notion of the deleterious effects of suppressed menses. Indeed, we may with much plausibility suppose that the dogma of the impurity of the menstruous blood originated in a medico-political necessity, in the warm climate which first gave rise to the suggestion. Moses was fully aware of the consequences of the want of cleanliness among his people; and no stranger to the inconveniences which arise from a neglect of it: he therefore looked upon women, during the period of their catamenial flow, as impure, and that they would remain so, until they were well absterged; hence his pointed directions and observances at this period. To ensure success to this scheme of cleanliness, the aid of medical speculation was required, and, most probably, it was not reluctantly obtained. The ancients, in a word, were scrupulously exact upon this point; for they considered the health of the woman materially connected with the menstrual discharge, and looked upon repose of body and tranquillity of mind as essential to the best performance of this secretion—they therefore forbade their females to appear in public, during its flow, lest agitation, or over-exertion, should derange this natural and important function; and to ensure compliance, urged the morbid nature of the menstruous fluid. Indeed they went so far, as to even forbid the employment of the bandage, now in almost universal use with females who are menstruating, because they declared it prevented the immediate flow of the menses, and thus permitted this fluid to accumulate, and stagnate in the vagina.

It was also supposed that hemorrhages from other parts of the body must be a necessary consequence of the uterus failing to secrete the menstruous blood; and we find, in books on medicine, very many instances, purporting to be illustrative of this hypothesis. I am not prepared to say that such a thing never has existed;[1] but I can with the most entire confidence declare I

[1] Gardien relates a curious case, upon the authority of M. Brûle, which he considers as a proof of the diversion of the menstrual action, but which I cannot

never witnessed such examples; and when they occur they must be considered, if entitled to any weight, but as exceptions to the rule. Have not instances occurred of fœtuses being found in the ovaria of virgins?

At the present day, I believe, no one will imagine, that he observes a woman's health to be worse, as a regular occurrence, as she approaches the period for her catamenial flow; nor think that he sees an improvement, after this period has passed over; yet it would seem essential to the support of this conjecture, that both one and the other should happen. Nor is there much reliance to be placed upon the existence of the "menstrual fever" of the older writers, though supported by the later authority of Bordeu. That fever may occasionally be perceived at such periods, I have no reason to deny; but that it is an attendant upon this discharge, as one of its phenomena, I have much reason to doubt. When this opinion arose, it was the order of the day to be minute; and an accidental circumstance was recorded for an essential character. What shall we say of women who have never menstruated? Do they enjoy equal health with those who do? Are they capable of fecundation? As regards our own experience, we would answer each of these questions in the negative—but Frank

but regard as a periodical hemorrhage; and altogether analogous to the bleeding hemorrhoids, which, in females, frequently observe as much regularity when the menses are regular as when they may be absent.

"*First deviation.*—The menses were suppressed in a young girl, whose life had been a series of illnesses up to that moment. She became regular after this: for six months the discharge was evacuated from little wounds in the legs occasioned by the breaking of some small vesicles.

"*Second deviation.*—There appeared on the left arm some vesicles or pimples, (boutons,) which yielded blood at the menstrual period during a year.

What analogy is there between the structure of these "vesicles or pimples," (boutons) and that of the uterus which yields the menstrual fluid? None whatever; the blood, in such instances, uniformly, I believe, coagulates. These changes, if they take place, must be regarded in some as compensating discharges, rather than as vicarious.

"*Third deviation.*—This was succeeded by a whitlow on the left thumb, and a chap upon the first phalanx; and at the end of two months the menstrual blood flowed periodically from this part for six months.

"*Fourth deviation.*—The girl was now attacked by an erysipelas in the face and the left eye, which terminated by two openings, one at the angle with the nose, and the other in the middle of the upper eyelid; these two openings yielded an evacuation periodically for two years; it then ceased from these parts, to be voided by the left thumb.

"*Fifth deviation.*—An erysipelas now showed itself upon the abdomen, attended by great itching; the navel was very painful, and for five months the blood flowed regularly from this part at each menstrual period.

"*Sixth deviation.*—A slight accident happened to the left internal malleolus of the ankle, and the blood flowed regularly from this part for four months.

"*Seventh deviation.*—An acute pain was felt in the left ear; a discharge took place from this part for two months.

"When the blood did not flow from any determinate spot, it would vent itself by a hemorrhage from the nose, or from the stomach by vomitings preceded by headach and giddiness."—*Traité Complet. d'Accouchemens, &c.* Vol. I. p. 239.

entertains a different opinion upon each of these points. He says, "We rarely meet with women who have never menstruated; however, there have been such instances, and such women have enjoyed the most perfect health; a strong constitution; they were even fruitful." Med. Pract. Tom. 3, p. 382.

To these observations, we must say, that they must have greater confirmation, before they can be relied upon as facts—for the reverse has been the constant result in the few cases which have fallen under our own notice. Nor is it very difficult to understand, that this must be the case; since it clearly proves, that when this evacuation does not take place, it must be owing to some decided imperfection in some *one* part, at least, of the genital system; and that, for the purposes of propagation, we are of opinion the most healthy condition of these organs is required. And we think that Frank himself yields the point completely, by his attempt to explain it. For he adds, immediately after what is above quoted, "If we meet with a great number of women thus situated, and who do not conceive, we must not accuse a defect of menstruation for it, but a vicious conformation of the genital parts." *Ib.*

CHAPTER VI.

DERANGED MENSTRUATION.

After giving the history of menstruation, it would seem proper we should furnish an account of the various derangements to which this function is liable, and the mode of treating them.

The derangements to which this discharge is liable are as follow:—

1st. Its too tardy appearance.

2d. Its interruption after having been established, commonly called the suppression of the menses.

3d. Its excess of quantity.

4th. Menorrhagia.

5th. Dysmenorrhœa, or painful menstruation.

6th. Its irregularity towards the decline of life.

Sect. I.—1. *Of the tardy Appearance of the Menses.*

In our history of menstruation we have shown that this process is more regulated by the condition of the system than by

the age of the female: and that though the climate and manners of each portion of the globe exert an influence upon the human constitution, yet that this influence is constantly observed to manifest itself in the more early or tardy development of the genital organs. This being the case, the period of puberty, or that period at which the human female is capable of propagating her species, and of which condition the menstrual discharge is the sign, will arrive at different periods of female life; but never, until the organs destined to furnish this evacuation are sufficiently developed, to meet, and overcome, all the ordinary contingencies of impregnation and of labour.

"The retardation of puberty retards, also, the development of the mental faculties; but preserves energy and freshness to the sentiments, and developes vigorous bodies; and that if in woman this state is prolonged after the ordinary periods, she appears to approximate to man, both in some of his tastes and in some of his characteristics." (Walker on Intermarriages.)

It will therefore follow, as a general rule, that climate will determine, in the female constitution, a period for the development of these organs, and consequently for the appearance of the menses, in each particular portion of the globe. This being the case, a general period is established, at which this evacuation may be looked for; and this is so nearly constant, (cæteris paribus,) that any deviation in this respect is looked upon as a state of derangement, if not of disease; hence, the surprise that is always expressed, when this evacuation anticipates the common period; and the solicitude when it does not take place at the ordinary time.

In consequence of this general law,—a law established by climate and manners,—many vulgar errors have arisen, which have too successfully exerted an influence upon the conduct of those who may have charge of females at this critical and interesting period of life.

The average period for the first appearance of the menses may be between the fourteenth and fifteenth year in this country. When they fail at this time, much anxiety is evinced on the part of the friends of the girl so circumstanced; and every indisposition with which she may be attacked is sure to be attributed to this cause. In the hope of provoking the menses, now due, as they suppose, from the age of the girl, she is almost always condemned to medical discipline, and but too frequently injured by submitting to its rules. Nothing, perhaps, would be more difficult to overcome than the prejudice of the necessity of this discharge, at a certain period of female life, and this period determined by the number of years which have passed. Women, upon this subject, are but too often incorrigibly wrong-headed; and we are sometimes obliged to yield, for the patient's sake, an appearance

of acquiescence. In many instances, did we attempt to convince them of their error, it would not only be labour lost, but what is worse, would too often deliver the patient over to the discipline of some rapacious quack, or some ignorant practitioner of medicine.

The lapse of a certain number of years is not all that is required that the menses may make their appearance; the uterus and ovaria must be developed, and be in good health, if I may so express myself, before this discharge will show itself; and this condition of the genital system is always indicated by corresponding changes in certain other portions of the system—there must, and will be, evidences of womanhood, before this event can happen;[1] and when these are absent, the girl should never be tortured by the class of remedies called emmenagogues.

There seem to be four conditions of the female system, in which the menses are tardy in their appearance: *a*, where there is little or no development of the genital organs; *b*, where this is taking place very slowly; *c*, where the development is interrupted by a chronic affection of some other part; *d*, where the most perfect development has taken place, yet they do not appear. The management of each of these conditions is different—I shall, therefore, treat of them in order.

Condition *a*, or where there is little or no development of the genital organs. This condition of the system is easily detected by the absence of all the signs which should characterize puberty—the breasts do not swell; nor are there capilli always on the pubes. In a girl thus circumstanced, who otherwise is in good health, it would be worse than idle, it would be cruel and dishonest, merely because she had attained her fourteenth or fifteenth year, to subject her to medical rule, or to goad her system by stimulating emmenagogues. In such a case, if the mother or friends are rational, and to be trusted, we may honestly give our opinion of the entire insufficiency of medicine to produce the desired end. We should explain, so far as we can, the nature of the function of menstruation, and of the prerequisites to this discharge; and attempt to produce on their minds the important conviction, that time, under proper circumstances, is all that is required to effect the anxiously hoped for change.

I have encountered many such cases—with some I have succeeded in bringing the friends to my opinion; in others I have not been so fortunate; the latter may be divided into two classes—the one, though not convinced by our reasoning, dare not openly

[1] I have lately seen three instances which contradict this rule—in neither of which was there the slightest development of the mammæ; but in each of these cases there was a diseased spine. Whether this condition of the spine has any influence upon the appearance of the menstrual evacuation, remains to be proved. See page 85.

bid defiance to it, because they fear responsibility; and thus will yield a reluctant acquiescence. The second, confident in their own judgment, will sometimes act upon it, to the imminent risk, if not to the destruction of the poor girl,[1] who may be the object of their solicitude.

With the latter, when importunate, we should use a temporizing plan; and by the administration of some entirely inert medicine, gain time, and save the patient from permanent ill health, or an untimely grave. I but too often call to mind, with bitter recollection, the fate of a most amiable and interesting young creature, for whom I was requested to prescribe for the expected menses, but who had not one mark which would justify an interference; and, especially, as she was in perfectly good health—she was fifteen, it is true; and this was all that could be urged by the mother in favour of an attempt to "bring down her courses." I relied too much upon the good sense of her anxious parent; and freely explained myself to her—she left me apparently satisfied with my reasoning; and I heard nothing of the poor child for six months: at the end of this time I was suddenly summoned to attend her, as she was said to be alarmingly ill.

When I saw her, she was throwing up blood in considerable quantities from the lungs; she died a few days after, from the excess of this discharge. The distracted mother told me, that though she appeared satisfied with what I had said, when she left me, she was convinced I was wrong; and that her daughter's health required the immediate establishment of the menstrual evacuation. With this view, she determined upon the trial of a medicine of much celebrity in similar cases, vended by a quack. She procured it, and gave it according to directions: in a few days her daughter became feverish, lost her appetite, and frequently vomited; her strength failed, and after a short time she was confined to her bed—she called upon the "Doctor," and made known to him the condition of her daughter; he encouraged her to persevere, and told her that the fever, &c., was an effort nature was making for the end proposed; she persevered, fatally persevered; for in a few days more she lost her lovely and only daughter. I examined the medicine which had been exhibited; it proved to be the oil of savin.

Condition *b*, or where the development is taking place slowly. This condition is known by the partial alteration the mammæ have undergone; by some expansion of body; and the protrusion of capilli on the pubes. The general health sometimes suffers slightly; especially if the girl has passed the fifteenth year, and grows rapidly—she is assailed by a train of nervous symptoms, as they are called: such as palpitation of the heart, ring-

[1] Bread pills are an excellent succedaneum, they interfere with nothing.

ing in the ears, headach; a temporary diminution of strength upon any sudden exertion, loss of appetite, or a whimsical state of it, &c.

This condition is not unfrequently accompanied by fluor albus; and when it is, more particularly deserves notice. This case merits attention, when the health appears to suffer; but must not be meddled with when it does not.

Our exertions in favour of such patients should tend to the invigoration of the system in general, and the development of the uterine system in particular. The first should be attempted, 1st, by the establishment of a regular course of exercise:—such as riding on horseback, when practicable; walking in proper weather; skipping the rope within doors, when the weather will not permit exercise abroad; dancing moderately, and with strict regard not to become over-heated, and cooling too suddenly; 2dly, by proper attention to dress; wearing flannel next to the skin in cold weather, and properly protecting the feet and legs against cold; carefully avoiding damp and wet places, and partial streams of cold air, especially when warm; 3dly, by a diet of easily digested substances, both of the animal and vegetable kind; avoiding all stimulating drinks, such as wine, spirits or beer, &c., under the specious pretext of their being strengthening.

The second must be accomplished by such medicines as have a direct or indirect action upon the uterus itself; of the direct, the tincture of cantharides appears to be the most efficient, and should be preferred to all others when leucorrhœa attends; thirty drops should be given three times a day, until this discharge ceases. We may gradually increase the dose, should the complaint be obstinate; for it is of primary importance that it be removed; for we need scarcely look for the catamenia, while this remains in any force—leucorrhœa is a kind of local depletion, and prevents that congestion of the uterus so favourable to development, and the production of the catamenial discharge. The parts should be regularly bathed every day with warm water; especially during the continuance of the fluor albus.

Of the indirect kind, aloes seems to be the more certain—the influence of this drug upon the uterus has been very long acknowledged, and was much extolled for this purpose by Morgagni and his contemporaries—it should be given in very small doses, and perseveringly continued; this medicine is, perhaps, preferable to the tinct. canth. where leucorrhœa does not attend; the following is the formula I generally employ:—

R. Gum aloe. suc. ʒss.
Pulv. Rhæi. opt. ʒj.
Ol. Caryoph. gut. iv.
Sapo Venet. gr. viij.
Syr. Rhæi. q. s.—M. f. pil. lx.

One of these to be given every night, night and morning, or every other night, as they may affect the bowels—the object is to keep the bowels free, but not purged. This prescription is a remarkable instance of the power of combination; for the very small dose just recommended will sometimes act with great force upon the bowels—so much so, sometimes, as to oblige us to reduce the above quantity one half. The same regard must be paid, at the same time, to air, exercise, and diet, as just recommended.

Condition *c*, or where this development is prevented by a chronic affection of some other part. The condition is readily detected by the presence of any such disease as may be capable of interrupting this discharge, after it has been thoroughly well established; such as phthisis pulmonalis; chronic inflammation of the liver, or spleen; dropsy, &c. Under the existence of either of these diseases, the menses will almost always be suspended; because it will certainly interrupt the development of the organs essential to the formation of this discharge, however favourably this expansion may have commenced.

This case constantly exposes the physician to the importunities of the friends of the patient, for something "to bring down the menses;" it is in this case, of all others, that they are persuaded nothing more is wanted to re-establish health. The physician must here conceal his real sentiments; for, however convinced he may be of the inefficacy of remedies for this purpose, he must not say so, if he regard the welfare of his patient. For no reasoning will convince them that the disappearance of the catamenia depends upon the diseased condition of some other part of the body; and consequently, that until this be removed, their reappearance is not to be expected. Indeed, the attempt would be mischievous; for the patient would most probably be taken from his, and consigned perhaps to worse hands. He should, however, declare to the friends of the patient, that this circumstance, (the absence of the menses,) has been duly weighed, and will influence his prescriptions.

In such cases, no prescription can be availing, but that calculated to remove the original disease; and of the diseases which may interrupt the menstrual action, it is not our immediate province to speak, as they are not peculiar to females.

It is true, however, that the long-continued suppression of the menses may seriously involve other viscera than the uterus; and their cure, when thus implicated, may depend upon the restoration of this discharge; but when this is the case, it constitutes the chronic idiopathic suppression of the catamenia. A want of attention to these different states of dysmenorrhœa, that is, whether they be idiopathic or symptomatic, has led to an empirical mode of treatment.

Condition *d*, or when the most perfect development has taken place, but the menses do not make their appearance. This condition is easily known by the girl having all the outward signs of womanhood; the menses are all that is wanting to complete her title to it, and fit her for the duties she is destined to fulfil. This case is sometimes attended with fluor albus; when it is, it must be treated as recommended above. At other times, there is a manifestation of an attempt by the uterus to produce the discharge; this is known by a pain in the back, hips, and loins, with a sensation of fulness in the pelvis, attended sometimes with a forcing or bearing down. These symptoms sometimes recur periodically; and may even be attended by a serous discharge from the vagina, resembling whites. The tinct. canthar., as recommended above, will rarely fail to produce the discharge, if given steadily for two or three weeks; or the madder may be given, especially if the period for the return of the pains just spoken of, be near at hand. Indeed, this seems to be the only period at which this substance is more decidedly useful than any other of the emmenagogue medicines: it acts at times so promptly, as almost to call in doubt its agency; but repeated success, under such circumstances, has convinced me of its efficacy.[1] From its possessing no general stimulating property, it becomes very valuable in cases of great irritability of the system, or where there may be slight febrile paroxysms; for it seems to be a law of the animal economy, to institute fever, whenever strength is considerably impaired; hence, we almost always see it after wasting discharges of every kind.

I have found that a strong decoction of this wood is of equal efficacy with the substance, and is much more easily taken. A pint of boiling water is directed to be poured upon an ounce of finely powdered madder and a scruple of bruised cloves; and then to be gently simmered for fifteen minutes; when cool, strain off and give a wine-glassful every three hours. I have lately had a case of this kind, where the madder succeeded most promptly. This case rarely gives much trouble, unless the interruption has been occasioned by imprudent exposure to wet or cold: in this instance, it must be treated as an obstruction.

A remarkable case of the non-appearance of the menses was lately under the care of my friend Dr. Physick and myself. A lady of thirty years of age had the usual concomitants of puberty at the ordinary age; these signs, however, were not followed by the catamenial flow, though periodical pain in the hips, loins, abdomen, particularly in the region of the uterus, numb-

[1] Dr. Schönlein, late Professor at Wurzburg, asserts that ten grains of aloes, dissolved in a small quantity of warm water, and thrown into the rectum, at the period when catamenia should appear, is more effectual than any other emmenagogue. Amer. Jour. of Med. Sciences, for Feb. 1836.

ness of the thighs, &c., seemed to promise it would be so. In this situation this young lady has remained from the time of puberty to her present age. Previously to my seeing her she had tried, without the least benefit, all the known emmenagogues; as her sufferings were severe, and so long-continued, several medical gentlemen were consulted previously, and so effectually were all the established remedies tried, that I was left almost without resource. On examining her per vaginam, nothing faulty could be discovered about the uterus.

The only thing that suggested itself, as a *possible* remedy, was to pass a flexible catheter into the cavity of the uterus, under a hope that something in the neck of this organ might obstruct the flow of perhaps accumulated menses. This suggestion was accordingly acted upon; and the extremity of a catheter was passed an inch and a half through the neck of the uterus. The withdrawing of the instrument was not followed by a discharge of any kind; and, consequently, our hopes were immediately destroyed, and our patient nowise relieved. She had never been troubled with leucorrhœa, or any other discharge from the vagina. This case we looked upon as not less ambiguous than hopeless. The sufferings of this patient were great; the abdomen, during the periods of pain, was very tender to the touch, and a little distended; a considerable hardness was felt immediately over the region of the pubes; but no circumscribed tumour, like the distended uterus, could be discovered. This case is remarkable for several of its circumstances: 1st, there is every outward manifestation of the development of its genital system; 2dly, at every return of the period at which this discharge should take place, there is pain and other symptoms which commonly announce this discharge to be at hand, when not regularly established; 3dly, as far as an examination per vaginam could ascertain, there was no defect in the uterus itself. In this case, the most probable conjecture I can make is, that there is an anatomical defect in the secreting surface of the uterus itself; and that the pains which are endured at each returning four weeks, may be owing to the plethoric or engorged state of this organ, and which is not relieved, as in common, by the secretion of the menstrual fluid.

In a very recent work on the practice of physic, by Dr. Mackintosh, Vol. II. p. 346, we find two or three cases strongly resembling the one just related, and which were relieved by means similar to that recommended, or rather employed in that case, and may be regarded as instances of amenorrhœa arising from an imperfect or imperforate state of the os uteri. It may not be amiss to direct the attention of the reader to a remarkable circumstance connected with the history of these cases; namely, that there was no collection of menstruous blood in the uterus, and

that the menstrual secretion did not appear to take place until after the perforation of the os tincæ. Is this a uniform occurrence in similar cases? Does menstrual secretion require, as a sine qua non, an outlet for its production? We think not, as has been asserted—for large accumulations have taken place (as in imperforate hymen) and we do not see what connexion a want of outlet can have in the menstrual secretions.

"A young woman, aged twenty-two, came from the country to consult Dr. J. A. Robertson, who sent her to me in the beginning of the winter of 1826. I collected the following particulars from herself and a female friend who accompanied her; that the menstrual discharge had not yet appeared; that she had always been healthy till she reached the age of sixteen, from which period her health began to suffer, and since which she has regularly complained every month of pains in the back and loins, together with a sense of weight and bearing-down in the passages. For some time her sufferings were slight, and she was still able to perform her duties as a servant, but for the last two years she has become comparatively weakly and emaciated, and has not known what it is to enjoy a day's ease; and she stated, that she would readily submit to any thing which might cure her. The girl appeared to be above the middle stature, the mammæ were undeveloped, she was of an awkward shape, and indeed her appearance, colour of skin, and sound of voice, were rather masculine. Her abdomen was not tumid, but I was told it was occasionally swollen, particularly after meals. She seemed to be of a nervous temperament, and was exceedingly shy and timid. Upon examination, my fingers passed readily into the vagina, and the uterus was felt much lower than usual, but I could discover no orifice. Dr. Robertson had previously detected the same fact, but had not then communicated the circumstance to me, thinking he might be mistaken. I repeated the examination many times, and after feeling the spot where the orifice ought to have been, which was distinguished by a small dimple, I attempted to introduce one of the smallest silver probes I could get made, but was unsuccessful in every attempt. It then occurred to me, that the malformation might be owing to an extension of the mucous membrane over the orifice, in which condition we sometimes see the urethra of a newborn male child. I determined upon giving her the chance of a cure, particularly as the means to be used would not certainly produce severe pain. Accordingly, the sharp and triangular extremity of a silver probe was introduced, directed by the finger, carried to the part above described, and a perforation made by employing a rotatory motion: the instrument was then withdrawn, and the round point introduced, which then readily passed up to the fundus of the uterus. For several days she complained of slight pain, attended with some discharge of mucus, a little

tinged here and there with bloody specks, and I did not think proper to interfere farther until the irritation had subsided. In about eight days I began to attempt a farther dilatation, which was persevered in daily, the size of the instrument being increased, till, by the twelfth or thirteenth day, I was able to introduce No. 6, male bougie, to the fundus of the uterus. On the following day there was the appearance of so much irritation, both local and constitutional, that I made no farther attempt. In two days afterwards she menstruated, and has been regular ever since, and suffers neither pain nor inconvenience. Her health and strength soon recruited, and in a short time her appearance became quite feminine. I saw her accidentally a few weeks before this article was written, and she is still in the enjoyment of good health.[1]

"In the case of amenorrhœa from imperfectly formed *os uteri*, the patient had at various times been afflicted with violent nervous symptoms; pain in the abdomen, sometimes of a distressing nature, and obstinate affections of the stomach and bowels; together with occasional retention of urine, and anomalous hysterical complaints. At every menstrual period she passed a little mucus, which was now and then slightly tinged, but had never the natural appearance, and it was always attended with great pain. After attaining the age of twenty-three, when her health was greatly impaired, and after she had tried all known remedies in vain, she most reluctantly, and after great delay, submitted to examination, and the *os uteri* was found so small as to be scarcely perceptible. She menstruated satisfactorily after several bougies had been passed through the os uteri, but I never succeeded in penetrating completely into the cavity of the uterus, either from an obstruction in the cervix, or, from what appears to me to be more probable, a curvature of the canal. Nevertheless, after dilating the passage as far as could be reached, (up to No. 7, bougie,) she menstruated naturally, freely, and without pain, and her health became wonderfully improved. It is but fair to mention, however, that this case was also complicated with extensive constriction of the rectum, which, I fear, is not yet completely removed."

Sect. II.—2. *Of the Suppression of the Menses.*

By a suppression of the menses, we are to understand the want of return of this discharge, at the accustomed period, after

[1] What became of the menstrual fluid that had been previously secreted? could it have been absorbed? We think not. Or did the uterus fail to secrete it in consequence of the obstruction of the neck; for it must be recollected, the symptoms of *secretion* had continued for more than two years.

it had been well established, when not interrupted by pregnaney, suckling, or disease.

For, however well established the menstrual diseharge may be, it is liable to be interrupted from a variety of causes, independently of pregnaney and suekling. The little regard whieh the generality of females pay to this period, exposes them too frequently to a derangement of the menses; nay, some I have known so reekless of eonsequenees, as designedly to interrupt them, by putting their feet in cold water, when engaged for a party of pleasure.

Frank mentions the ease of a young lady who put her feet several times in cold water during the flow of her menses, beeause she expeeted her lover, which quiekly arrested them; an inflammation of the womb followed, and she was brought, dying, into the hospital at Vienna. He also states, on the authority of a celebrated surgeon of Helmstadt, that a young lady was attaeked with amaurosis of one eye, in eonsequenee of the sudden suppression of the menses from putting her feet in eold water—and when this diseharge was recalled, she fortunately reeovered the sight of her eye. And of one of his relations, of fine health and rare beauty, who, after having daneed all night, with her menses on her, left the ball-room in full perspiration; she would not wait for her earriage, but proeeeded home, whieh was not far off. She was attaeked with metritis, and died on the fourth day. It is not, perhaps, unworthy of observation, that amaurosis has followed, in a number of eases, the sudden stoppage of the menstrual diseharge.

In addition to the ease just related by Frank, we may add the one by Mr. Brown, in Vol. XXVI. of the Edinb. Med. and Surg. Journ. p. 279. In this case the patient was about forty years of age—she had become very mueh heated by a long walk in hot weather—at the end of her walk she was seized with her eatamenia, but whieh was entirely suppressed by a drink of eold milk; this was followed by headaeh, oppression, hemiplegia, and amaurosis of the left eye. Mr. B's attention was direeted to the restoration of the menses, in whieh he suceeeded in about six months; at whieh time her sight was restored. Perhaps the suppression of any sanguineous diseharge might have the same eonsequenees. That the eyes are particularly liable to affeetions from sueh like causes, is rendered at least probable, by the ease of speetral illusion from suppressed hemorrhoïs, related in Hufeland's Journal for September, 1824.

"A gentleman of Carlsruhe, in Silesia, sixty years of age, and of upright eharaeter, liberal, unprejudiced, eonstantly engaged with his profession, and inclined to nothing so little as to communings with the kingdom of spirits, had long enjoyed good health, exeept that he had oeeasionally eolie on exposing himself to eold, was liable from time to time to a hemorrhoidal flux, and had a cata-

ract in one eye, and dimness and weakness of sight in the other. A short time before he was seized with the affection about to be related, he received a visit from his niece, who was far advanced in pregnancy, accompanied by her husband. Soon afterwards the family received an alarm from a house taking fire near their dwelling. On the evening of that day, his wife remarked that he was restless, and put questions in a singular way. About six, when the candles were lighted, he insisted with his wife, that his niece had entered the room, taking his hand, and retired on his rising to meet her; that her husband escorted her; and that three other persons whom he did not know were also in the room. On going up stairs to supper, the spectral company went along with him, and after supper they returned with him to the lower room, and two of them went to bed with him. At length, tired of the illusion, he drew the coverlet over his eyes, and leaving the spectres to their fate, fell asleep. Next morning his spiritual friends did not make their appearance; but a new illusion of sight took their place. He thought the walls of his apartment were all checkered like a chess-board, and so vivid was the deception, that it obliterated a number of engravings which hung on the walls. This lasted two days, and after it disappeared, his vision returned to its natural state. For some time after, he complained of weakness, giddiness, and anxiety in the chest. His appetite, however, was good; he slept well; and the pulse was natural. He had not had any hemorrhoidal discharge for some time before. Gentle laxatives; bathing the feet; and afterwards the tincture of cinchona, restored him soon to his usual state of health. His mind, excepting so far as regarded the spectral illusions, appears to have been quite entire.

Cold, in some form or other, may be considered as the most frequent remote cause of this suppression; and it may be applied either in the interval, just as they are making their appearance, or after they have flowed some time.

When cold is applied in the interval, with sufficient force to prevent the recurrence of this discharge, the first notice the woman has of its influence is, the want of return of the menses at the period next expected. For the most part, at first, neither pain nor other inconvenience is felt; but if they have failed for several periods, the approach of ill health is then perceived, and she becomes an object of medical care. She now becomes pale, emaciated, and is much enfeebled—a train of nervous symptoms may be superadded; as palpitation of the heart, difficulty of breathing, a sense of suffocation, especially after any thing has hurried the circulation—to these fluor albus may be added, which soon aggravates the previous unpleasant symptoms.

If cold be applied when the menses are about to appear, or after they have flowed some time, the symptoms may be very

much varied: in such cases, the patient is attacked with violent pain in the head, back, or bowels; and this with such severity, sometimes, as to create great anxiety for her safety. I have known temporary derangement, violent hysteria, and severe colics, result from this cause. For the relief of these, we are obliged to have recourse to blood-letting, purging, warm bath, camphor, opium, asafœtida, &c.; and for the time being, are necessitated to treat the complaints as if they were independent of such a cause. For we can very rarely re-establish the discharge, after it has been thus interrupted; nor should it always be attempted; for sometimes much injury is done by neglecting the consequences of this stoppage, by directing the force of our endeavours to a recall of the discharge. I admit, that after bleeding and purging have been performed, advantage is sometimes derived from either the general or partial warm-bath, or hot fomentations to the abdomen, especially if pain be experienced in the region of the uterus. Should pain be severe, I have found nothing answer so well as an injection composed of a gill of thin starch, a tea-spoonful of laudanum, and thirty grains of finely powdered camphor. If it be complicated with hysteria, the addition of three tea-spoonfuls of the tincture of asafœtida, instead of camphor, may be useful: this may be repeated pro re nata. If colic supervene upon the interruption of the menses, (after bleeding, should the pulse have indicated it,) I have found the most certain relief given by half-ounce doses of the elix. proprietat. every three hours, in warm sweetened milk, until the bowels are open.

Having pointed out, in a cursory manner, the plan of treatment for the consequences of a sudden interruption of the menses, I shall now proceed to the consideration of such measures as will tend to invite their return. In doing this I must be considered as speaking of the idiopathic suppression only, and of the mode of treatment proper for it. I must here premise, that I do not look upon every deviation in regularity as a legitimate reason for medical interference; for in many instances, with young girls, and especially those who began precociously to menstruate, there will be a want of precision in return, that must not be mistaken for disease; for, did we subject the woman to medical treatment for every aberration of this kind, we should be condemning her to most improper discipline. So, also, it many times happens with hale, robust young women, that a temporary suspension of the menses takes place from cold, or passions or emotions of the mind,[1] but which after a certain time will return without medi-

[1] A lady informed me, that while menstruating, she fell down stairs; and from that moment the discharge was suspended; nor did it reappear until the next period. And a case is related in the Lancet, where a suppression took place, from a violent fit of passion. *Lancet*, Vol. i. Case ix. p. 497. See also Case, p. 126.

cal application, or even the slightest premonition. My rule on this point constantly is, never to interfere, unless there be some evidence that the health is suffering by the absence of this discharge. For it very often happens, if we draw blood, (especially perhaps from the foot,) to the amount of eight or ten ounces, or as near as it can be ascertained, that the menses should flow if they were not obstructed, we very often succeed in immediately removing the obstruction.

The general health rarely, if ever, suffers before three or four successive periods have passed, unless this obstruction be accompanied by a bad state of fluor albus. If this attend, the health may be earlier affected; and then require to be immediately noticed. The remedies for this condition of the system will vary according to *the state of the system;* and I cannot too earnestly recommend attention to this important practical point, as success in the treatment of these complaints almost exclusively depends upon the discrimination. Perhaps there is not, in the whole range of medical practice, such a departure from principles as in the treatment of certain female complaints—they seem to be prescribed for with determined empiricism; as if the laws which govern disease in general were not applicable to them. The want of success, in many of the complaints of females, is owing almost altogether to the determination to discover specifics for them; for the existing condition of the system is never taken into calculation, when a prescription is made; hence, the almost uniform failure of certain remedies in the hands of some practitioners, which are almost as uniformly successful in the hands of others. A practitioner acquires, by long habit, and correct observation, a control over certain diseases, that will not yield even to the same remedies, when indiscriminately used by others—this *tact* in the use of certain medicines is but the result of accurate observations on the various conditions of the circulating system; and when this study is neglected, it is a moot point whether the remedy succeed or not.

In prescribing, then, for the disease, or rather derangement, under consideration, it were almost hopeless to employ remedies without the strictest attention to the existing state of the circulating system; the remedy which will relieve in one case may not only be unavailing, but perhaps injurious in another; it therefore behooves every one to become familiar with the various states of the pulse, before he prescribes his remedies, if he expects to succeed by their employment.

The fear of *debility* has occasioned the death of thousands; and perhaps to the end of time it will have its victims—every interruption of a natural action, which may involve the system at large with nine-tenths of the writers upon diseases, originates in *debility;* hence the whole class of diseases we are considering is

supposed to either originate in, or be perpetuated by, *weakness:* thus, fluor albus, and the deranged condition of the menses, are considered as diseases of *weakness;* than which, as a general rule, nothing can be farther from the truth. The most opposite remedies will, in their turn, remove the same diseases; and the person who cannot understand the reason of this simple fact, will never be able to combat them with success.

Having stated some general notions on the management of the complaints under consideration, I shall now proceed to detail the practice essential in each particular state of the system. When the suppression is of recent date, that is, not more than of three or four months' standing, I almost always find that the pulse, so far from betraying marks of *debility*, manifests a tendency to an excess of action: when this is the case, we should commence the treatment with such remedies and regimen as will reduce the pulse to a proper standard, before we proceed to the exhibition of such medicines as shall have a direct tendency to produce the menstruous discharge; which is to be done by blood-letting, by purging, and by a strict vegetable diet. This plan is so effective, in some cases, as to require nothing more for the re-establishment of health; and in others so indispensable, that success can only result from its employment as a preparative step. I will illustrate both of these states by appropriate cases.

Case First.

Miss ——, after having stood a long time on a damp brick-paved cellar on a hot day, and at the warm employment of "preserving," found herself chilly, and her menses arrested; her mother had her daughter's feet put in warm water, and gave her some hot pennyroyal tea; this removed the chilliness, but did not restore the discharge; she was occasionally taking remedies without effect, until some time after the third month; at this time she became more indisposed, and I was requested to visit her—I found her labouring under severe headach, which was much increased by sitting up, or motion; her pulse full, and a little quickened: her tongue slightly furred, her appetite impaired, and her bowels costive. I directed her to lose twelve ounces of blood; to be freely purged by senna; and to confine herself to rennet-whey, barley water, or thin tapioca, for nourishment.

Her symptoms were much less severe next day, but not entirely removed—I ordered another dose of senna tea, and the same diet to be continued: on my next visit she appeared perfectly relieved; but I insisted on her using a spare diet for some time longer, and to take an aloetic pill every night: this plan was pursued for several days, at the end of which time her menses made their appearance.

Case Second.

Miss ——, after a stoppage of her menses for four months, desired my advice; her health of late began to suffer considerably—she was pale and emaciated; had some fluor albus; headach; loss of appetite; and was readily agitated by slight causes; much palpitation of the heart; especially on going up stairs. Her pulse was tense and hurried, skin hot, and tongue considerably furred: especially in the morning. I ordered her to lose ten ounces of blood; to be purged by senna, and to be confined to a vegetable diet. She was relieved by these remedies; but as the force of her pulse was not entirely subdued, I thought it best to keep the bowels loose, and confine her still to a vegetable diet. This plan was strictly persisted in for about ten days, which reduced her pulse sufficiently to bear the tincture of cantharides, in doses of five and thirty drops, three times a day: in a few days the fluor albus stopped; and in a few more, the menses made their appearance. Upon these two cases, I shall merely remark, that had I given any emmenagogue medicine in the commencement, I should not have had the pleasure of seeing my patient so quickly restored—or, in other words, had these cases been treated as cases of *debility*, I am certain the complaint would have been aggravated; yet in the last, there were strong marks of *debility*, agreeably to the common notions upon this subject.

The madder may be given more safely than any other remedy with which I am acquainted, without such particular attention being paid to the pulse, as it excites no increase of action in it. I am in the habit of using this drug without previous preparation, when applied to near the period at which the menses should appear; and sometimes succeed most promptly with it—indeed, this is the only time at which it seems to be successful; for if it fail then, it is rarely more fortunate afterwards.[1]

When the madder fails, I commence, in recent cases, with the tincture of cantharides, after having duly prepared the system for its reception. I rarely increase the quantity more than ten or fifteen drops beyond the original dose, as the moderate doses of thirty-five or forty have always been found sufficient with me, when the medicine would succeed at all. Should the cantharides fail, the volatile tincture of guaiacum is then ordered: which, when exhibited in proper cases, has never yet failed in my hands. I give it for this purpose, with a confidence I attach to no other medicine. This confidence is the result of very many years' experience of its efficacy. I have often succeeded with it, where almost all the other emmenagogues have failed; nay, I have

[1] See p. 107.

done more; I have found it to answer completely, after it was said to have had a fair trial—but this fair trial was very far from being so.[1] As it is much more stimulating than the madder, or cantharides, I am more attentive to have the system properly prepared. I, therefore, generally reduce the pulse lower than for the medicines just named: this is easily effected by the loss of a little more blood than in the other cases; purging more freely; and insisting on a low diet for a few days.

When speaking of the tact that is acquired in the administration of certain medicines in certain diseases, I had particular reference to the employment of the tincture of guaiacum as an emmenagogue. I have, for more than forty years, almost daily used this medicine in suppressed catamenia; and more especially, in those of long standing, without its having failed in any case proper for its use[2]—more cannot be said of any remedy.

I say this in the most perfect good faith, as I have learned that some of my brother practitioners have not been equally successful with it—but I think I can readily account for their failure: 1st, From their not placing the system in a proper situation for its use; and, 2dly, by not properly persevering in the remedy. Neglecting these important points, it can readily be imagined, that it may not succeed; for I deem an attention to them essential to its success; more especially in those cases where many months of interruption have existed. I think one of its superiorities consists in its certainty in cases of very long standing; and I could readily furnish, from my note book, a number of instances, where it succeeds to restore the menses after an interruption of from nine months to nearly three years.

The mode of using it is, a tea-spoonful every morning, noon, and evening, in a wine-glassful of sweetened milk; or, where not forbidden by some peculiarity of circumstance, as much white wine, as Sherry, Teneriffe, or Madeira. The dose must be gradually increased, in those cases where a perseverance beyond four or five weeks becomes necessary. Should this medicine disturb the bowels too much, a few drops of laudanum must be

[1] Mr. Jewel has used this tincture in the Middlesex Infirmary, and remarks, "In the administration of this medicine, it is but justice to state, that I have experienced that, which in common we experience from all—occasional disappointment; at the same time I conceive there is no medicine whose effects are more certain, provided the catamenial suppression does not exist as a consequence of any organic disease."—Lond. Med. and Phys. Journ. And Dr. Macleod, the editor of this Journal, in a note to Dr. Jewel's Report, says that he has been in the habit of employing the medicine, "and, in general, with very satisfactory results."

[2] By a proper case I mean, where the suppression is idiopathic, and not one in which the uterus has its functions interrupted by disease, or pregnancy—for, in the latter, I have in two or three instances been imposed upon, notwithstanding all my caution: and where I dared not suppose this condition to exist. But by these few cases, I learned, so far as they would go, that it would not produce abortion.

added to each dose; but if, on the contrary, they should not be sufficiently opened, the addition of a little of the resin of jalap, or of powdered rhubarb, will be an improvement.

As the tincture I employ is different from the tincture of the shops, I think it right to subjoin my formula.

℞ Pulv. G. Guaiac. opt. ℥iv.
Carbon. sod. vel. potas. ℥iss.
Pulv. Piment. - - - - ℥j.
Alcohol. dilut. - - - - ℔j.
digt.—for a few days.

The volatile spirit of ammonia is to be added, pro re nata, in the proportion of a drachm or two, to every four ounces of tincture; or less, or more, agreeably to the state of the system.

M. Guibert highly recommends the use of Venice turpentine, in the amenorrhœa of feeble, nervous women of lymphatic temperament. He directs the following form for its exhibition:—

℞ Terebinth. veneta. ℥ij.
Sapo. venet. - - - ℥iij.
Pulv. Rad. Glycyrrh. q. s.
f. mass, div. in pil. lxxv.—Two to be taken every four hours.

He says that he is rarely obliged to continue this medicine beyond twelve days, even in inveterate cases.[1]

Dr. Lavagna has published a number of cases treated with injections of ammonia in solution. They are highly interesting, as they discover a new resource in this sometimes highly obstinate derangement of the menstrual action.

He observes, "If we consider the different medicinal substances which compose the list of supposed emmenagogues, and the consequences which generally follow retarded or suppressed menstruation; if we examine the mode in which these substances act on the human body, it will be readily perceived that the animating influence of love, and the physical effects of a rational indulgence of the desires by which the species is reproduced, correspond with the practical views by which we are guided in the treatment of amenorrhœa." And he adds, "There is hardly a physician, however limited his practice, to whose lot it has not fallen to observe young females, who, at the age of puberty, were dull, languid, pale, and labouring under scanty menstruation, suddenly restored to bloom, animation, and vigour, and to the salutary sanguineous evacuation, by an opportunity being afforded them of participating in conjugal duties. Whenever I reflected on this

[1] The spirits of turpentine has been found successful, according to Dr. Elliotson, in this stoppage. He used an ounce of the spirits of turpentine in a pint of flaxseed tea, or barley water, as an enemata, and this was repeated twice, when the menses appeared.

fact, and considered the numerous cases by which it was established, I never doubted that any stimulating medicine which might have the effect of determining an increased sanguineous afflux to the matrix would succeed in exciting suppressed menstrual evacuations. Under this impression, I determined to make a trial of liquid ammonia, in cases of amenorrhœa. This highly stimulating volatile medicine, added to warm milk, or any other fluid, if injected in suitable quantity into the cavity of the matrix, or along the canal of the vagina, is calculated to produce a sensation of orgasm, similar to that which is known to be most favourable to the cure of suppressed menses." Lancet, Vol. I. p. 497.

We have thought proper to introduce to the reader the reasoning of Dr. Lavagna; and though we do not altogether agree to his theory for "restoring the suppressed menses," we nevertheless think, that the cases by which he illustrates his practice are no less important than convincing. We are of opinion, that his plan should be tried in cases where the ordinary means have failed: these, however, we are disposed to believe would be few, if the plans we have suggested were correctly put in practice, and duly persevered in. It is true, that the remedies we have proposed require oftentimes a long perseverance, and the stomach loathes them, from their quantity and constant use. Yet with these certain disadvantages, we are of opinion, that the unmarried women in this country, would very reluctantly submit to the alternative, however imperious the necessity.

The mode of using it is to throw up the vagina, by means of a female syringe, ten or twelve drops of the aqua ammonia puræ in an ounce of milk or water, four or five times a day. It should be of such strength as to excite an unpleasant irritation in the part, after each trial of it. If this prove rather excessive, the ammonia should be more diluted, or used in a smaller quantity. It would appear, from the history of Dr. L.'s cases, that some unpleasant feelings are essential to the success of the remedy.

If there be no mistake in the details of the cases, the action of the ammonia was very prompt, even where the suppression had assumed a chronic form.[1] Most of the cases required a perseverance of but a very few days in the injection.

And, as a last resource for the girl under such circumstances, marriage, from the time of Hippocrates downwards, has been recommended, though of late with less confidence than formerly. As a mechanical irritant it may be occasionally useful, though

[1] Dr. Hosack (New York Med. and Phys. Jour.) declares, he treated a case successfully, of ten years' standing, by means of this remedy, after many others had been unavailingly employed. He directed a drachm of the ammonia, and a pint of rain water, to be thrown up the vagina, three times a day. The cure was effected in five weeks. I am sorry I cannot confirm the favourable accounts of Drs. Lavagna and Hosack—in my hands it has utterly failed.

our own experience goes but a little way to confirm its utility. For we are of opinion, that authors have been led into error upon this point, by not discriminating between the sanguineous discharge, after a first coitus, and which is consequent either to the rupture of the hymen, or from the severe distention of the parts, and a genuine menstrual discharge—for the first almost invariably takes place with virgins, though they may be perfectly regular, and may have menstruated but a few days previously.

There is another remedy proposed by Dr. C. Patterson, namely, stimulating the external surfaces of the mammæ; which we give for what it is worth, until experience decides upon its powers.

Catharine Power, aged 19 years, applied to me on the 14th Sept. 1832, She complained of headach, languor, loss of appetite, and inability to attend to her usual business, that of a servant. She stated, that, about the middle of April, the menstrual discharge being then present, she incautiously exposed herself to cold in washing clothes at a river. The catamenia then suddenly ceased, had not since returned, and from that period she had been constantly subject to ill health. She had consulted different medical gentlemen, and taken a great variety of medicines, with little advantage.

I directed that the clavicular half of the right mamma should be covered with a sinapism. It was allowed to remain on for thirty minutes; and on visiting her in six or seven hours after its removal, I found the whole right breast considerably swollen, hot and painful. The next morning the enlargement of the mamma was very much increased, the tumefaction having extended to the clavicle and axilla of the irritated side. There was no hard circumscribed or prominent tumour, but a painful diffuse elastic distention of the mammary gland and surrounding cellular substance. On the evening of the day next succeeding the application of the sinapism, the poor girl, with much joy, reported that the catamenia had appeared. The flux having continued for three or four days in moderate quantity, she then found herself greatly relieved of the headach and other most distressing symptoms; and in a week her health was so far restored that she ceased to require any farther attendance.

In this case cold evaporating lotions and gentle saline aperients were employed to moderate the local phlogistic engorgement. She has continued to menstruate at her regular periods.

From the facility with which the menstrual flux was induced in the preceding case, it would seem that the beneficial effects, in amenorrhœa, lately observed to arise from the long continued daily application of one or two leeches to the breasts, was entirely owing to the great irritation which the leech-bites had eventually produced in these organs. The abstraction of blood by

leeches from the mammæ, has not, according to the reports of the cases in which they were employed, the least perceptible influence over the uterine functions, until pain, heat and excessive tumefaction of the breast had been first developed.[1]

Phlogistic engorgement of the mammæ being, then, the essential movement, which in this instance determined the flow of the catamenial discharge, it must be obvious, that for the production of the necessary irritation to effect that engorgement, the simple application of a sinapism would have been, in every respect, infinitely preferable to the tedious and troublesome process of the daily repetition of leeching. But it must not be supposed that mammary irritation is applicable to every form of amenorrhœa. I know that it will not be successful in every case, for I have found it to fail.

Analogous to suppression, may be considered the very sparing quantity of the menstrual discharge—this may happen, 1st, to young women in the prime of life; and 2dly, to women pretty far advanced towards that period at which the menses are about to cease. With the first, when the usual quantity fails to be discharged, it always excites alarm, and recourse is almost instantly had to the nostrums of old women, or perhaps regular application is made to the physician. I have seen many of these cases; and they may be classed under two heads:—1st, Where this takes place from some accidental irregularity in the secreting powers of the uterus; and, 2dly, Where there is too early a tendency to cessation. The first may be again divided into two states; 1st, When, after it has continued some time, the health seems to be impaired pretty much after the same manner as if a decided suppression were present; for it has very much the same accompanying symptoms; and when this happens, the complaint, for the most part, seems to be relieved by the same remedies; especially by the tincture of cantharides.[2] In the second state, it seemed

[1] These cases appear to be strengthened by a case recorded by Mr. Jones, and published in the Lancet for May, 1835. The subject of this case was a woman, aged twenty-one, who had been labouring under suppression of the menses for more than eighteen months, with much consequent derangement of her general health. She had been under a variety of treatment, without benefit; and Mr. Jones dosed her for several weeks with aloetic purgatives, mineral tonics, and vegetable bitters, cantharides, secale cornutum, &c. &c., without producing the slightest appearance of the diminution of her disease. He then recommended a sinapism consisting of equal parts of mustard and linseed meal, and water q. s., to be applied over the whole of the right mamma, and there to remain as long as it could be borne. The sinapism was continued for about an hour and a half, and on the evening of the same day the breast was very painful and much swollen; which symptoms increased so much, on the third day, as to cause much symptomatic fever. On the fifth day the catamenia appeared in considerable quantity, and continued for nearly four days. The patient, after this, menstruated regularly, and is now in perfect health.—Amer. Jour. of Med. Sciences, for Aug. 1835.

[2] Dr. Lavagna uses the ammoniacal injections in these cases, with apparent success.

to be, in a number of the instances which fell under my notice, an habitual condition of the uterus; and, though the quantity discharged was sometimes extremely small, yet all the natural or prolific powers of the genital system appeared to be preserved: for I have known pregnancy to follow in several cases. I have prescribed all the usual remedies for each of these cases, without effecting any change in the quantity discharged; yet, after marriage, some of these women became mothers. I have, therefore, of late years, not interfered with them, where there was no evidence of ill health. However, it must be confessed, though ill health may not attend, some who are thus circumstanced are not fruitful; but in these, so far as I have seen, it has been the anticipation of a final cessation. I have met with three instances, where this evacuation had ceased altogether before the twenty-fifth year; and two before the thirtieth year: the health of these women appeared to be as perfect as if they had had this discharge in its most regular manner.

When scanty menstruation takes place in women in the decline of life, it is not generally so regular in its periods as in young women; yet as we have never witnessed any unpleasant consequences to arise, we never thought it proper to interfere; especially in women after their five and thirtieth year. This condition of the menses is more apt to take place in unmarried women, and in widows, than in married women.

In some instances of young married women, I have had strong reasons to believe it was owing to a deranged condition of the ovaria; for they were not only barren, but had never discovered any desire for sexual intercourse; or at least, were perfectly indifferent to it.

It would seem to follow, from these observations, that the cases of deficient menstruation, in which the health appears to suffer in a greater or less degree, are those of the most easy management; but in the treatment of them, the same regard must be paid to the condition of the vascular system, as if an absolute obstruction existed. I shall relate a case, by way of illustrating the material points in question. Mrs. ——, aged twenty, during a period of her catamenial flow, suddenly heard of the death of her absent husband—the menses were immediately suspended, and continued so for five months; during which time she suffered much from a train of most untoward nervous symptoms: at the end of five months there was a slight show, which was repeated at the end of another month, and so on, for two or three periods: but her health did not improve, as was fondly hoped, by this slight discharge, and I was now consulted. I found her, as stated above, with a variety of nervous symptoms; which were easily exacerbated by the slightest mental distress; together with considerable leucorrhœa—much headach; hot skin

towards evening: costive bowels—she lost ten ounces of blood; was purged by aloes and rhubarb; kept upon a milk and vegetable diet; took the tincture of cantharides; and the next month she had an ample discharge.

Sect. III.—3. *Of the Immoderate Flow of the Menses.*

This complaint is much more rare than we should be led to believe, did we regard popular opinion; or even some of the writers of practical systems of either medicine or midwifery. I have seen, comparatively, very few cases of *superabundant menses*—for in my consideration of this subject, I shall confine myself to what should be strictly called an inordinate menstrual secretion. This complaint has been very often confounded with uterine hemorrhage;[1] because the latter almost always commences with a genuine menstrual evacuation, which continues for two or three days, and is then followed by a discharge of pure common blood; all of which, by careless observers, has been classed under an "immoderate flow of the menses." Should this confusion be admitted into the description of this complaint, we need not be surprised at the avowed frequency of immoderate menses.

There is an almost endless variety of uterine constitution, if I may so term it; consequently, there will be a corresponding variety in the performance of its duties; hence, one woman will discharge twice or three times as much of the menstruous fluid as another, without suffering from this apparent excess. For, as respects this discharge, excess must be regarded as a relative term; and it should only be considered excessive, when it has an injurious effect upon the general health; if it produce no debility, or other disagreeable symptoms, we have no right to call this discharge immoderate or excessive; for it is only so, as compared with those who may evacuate less, but yet be in no better health. I must therefore repeat that this discharge, in excess, is of very rare occurrence; and that, so long as it does not impair the constitution, it should never be meddled with; especially if it be not inimical to impregnation.

I am well acquainted with a lady, who has more than once assured me, that from her earliest recollection of this discharge after it had commenced, (which was at her twelfth year,) she never enjoyed a longer exemption from it than ten days, unless

[1] Mr. Burns says, "Some women menstruate more copiously or more frequently, than by the general laws of the system they ought to do. The discharge is menstruous, and does not coagulate, which distinguishes this state from uterine hemorrhage." Vol. I. p. 155, James's Ed.

she was pregnant, or suckling; yet, during the whole of that time she had never suffered the slightest indisposition, that could be attributed to that cause: she was, therefore, two-thirds of her time, with the exceptions just mentioned, giving issue to this discharge. She also declared her belief, that, from what she could learn from others, she evacuated daily as much as women in general; consequently, she must have parted with at least three or four times as much as is commonly lost during a common period.

Should this complaint prove excessive, in our acceptation of the term, namely, where health suffers from this cause, it should be treated, *perhaps*, as a hemorrhage, properly so called—I say perhaps; because, I have seen but one case, where, from the quantity of the discharge, debility, and other evils were induced; and this case was treated as a common hemorrhage.

Miss ——, aged seventeen, was seized with a severe tertian, which, before it could be arrested, required much depletion, and left her for some time in a state of great weakness. After it was thought she was recovered, her menstrual discharges became very abundant, and recurred, as they were always wont to do, every three weeks. The quantity discharged was very great, as far as could be determined by the pulse at the time, and its appearance upon the cloths. She was very feeble, and was confined to her bed from weakness, before I visited her. I saw her when her menstrual period was upon her; she was greatly reduced in strength, and was much emaciated. Her pulse was frequent and weak; her feet and hands cold; she was extremely pale; distressed by palpitation of the heart; ringing in the ears; and great sickness of stomach.

She was immediately ordered to have bottles of warm water placed at her feet; to take thirty drops of laudanum, with as much of Hoffman's anodyne liquor; two grains of the sugar of lead, with a third of a grain of opium, every hour, until the discharge should be moderated. The character of the discharge I was particular to ascertain; and from the most cautious examination, I had no hesitation to believe, (contrary to my first impression,) that it was a genuine menstrual flux, of unusual severity. By the plan just mentioned, the discharge was much moderated in the course of a few hours; but early the next morning, I was sent for in great haste, as the flow had very much increased. I now ordered twenty grains of the sugar of lead, a tea-spoonful of laudanum, and a gill of lukewarm water, as an injection—this quickly arrested the discharge; which did not return from that time; if we except a very moderate stillicidium of three or four days' continuance. In the interval, a nourishing diet was directed —quiet, and a mattress to sleep upon; also twenty drops of the elixir of vitriol, in strong, sweetened rose-leaf tea, four times a

day and the bowels kept open by small but repeated doses of the sulphate of magnesia. On the arrival of the next period, she was again attacked with a flow as abundant as on the former occasion; the same remedies were again successfully employed. During the succeeding interval, two grains of the sacch. sat. every morning, noon, and evening, were ordered in lieu of the vitriol; she was directed to drink freely of cold chamomile and orange-peel tea; a plaster of Burgundy pitch to be applied to the back; and the legs and feet to be kept very warmly clothed.

The next discharge was considerably more moderate, but still too abundant; the sugar of lead pills were now given every two hours until the flow should cease. The interval was conducted as before; and, after this time, there was no farther necessity of medicine. Exercise, and sea-bathing, very soon confirmed her health; nor did she afterwards suffer any return.

The plan just detailed proved successful in the instance mentioned; but whether it would be so in other cases, my limited experience in "excessive menstruation," will not permit me to declare—though I am disposed to think it might; and, under similar circumstances, I should certainly adopt it.

Sect. IV.—4. *Dysmenorrhœa, or Painful Menstruation.*

This disease is very common in our climate; and is one from which not only great suffering is experienced, but also very frequently one of great obstinacy. The woman is obnoxious to it during every part of the menstruating period of life.

It would, perhaps, be very difficult to assign all its remote causes: the most common are the application of cold during the flow of the menses; taking cold after abortion; and, in several instances, I have known it to follow the consummation of marriage. This latter cause is, perhaps, the most difficult of explanation; for it would seem to have no such agency, reasoning *à priori*. In a number of other instances, the causes appeared to be so hidden, as not to be cognizable. The married and the single woman are alike subject to it.

The suffering, at the menstrual periods, is sometimes severe beyond description: it resembles, in intensity, the pains of labour, or of abortion, properly so called; for, to either, the case may be said to have a strong analogy. It usually commences by a slight menstruous discharge, which is pretty suddenly arrested: pain now almost instantly ensues; this is described by women to be of a forcing, bearing down kind; returning at longer or shorter intervals until a membranous substance, or small coagula, are

discharged.[1] If it be a membranous substance, it will be found of unequal size, sometimes small, at other times large, and sometimes it resembles the cavity from which it has been expelled; at other times it will be broken into many fragments. After the expulsion of this substance, the woman enjoys ease, unless there be a fresh production; in which case it requires, for its expulsion, fresh contractile exertions of the uterus.

The quantity discharged is very various; sometimes it is small, and at other times very abundant. I have seen a portion not much larger than my nail; and, again, I have witnessed as much as would fill a large tumbler. The periods employed for the expulsion of this substance also vary; sometimes requiring but a few hours, at other times several days. The degree of suffering is not always in proportion to the quantity of the substance expelled; indeed the pain would rather appear to be less, when much is discharged; which, perhaps, is not of difficult explanation.

There appear to be two distinct states of this affection: one, where the mammæ sympathize with the uterus, by becoming tumid and oftentimes extremely painful; the other is, where there is no such affection. These two conditions are not equally manageable: the one accompanied with painful breasts, so far as my observations have gone, is the more so of the two.

Dr. Eberle, in the paper just alluded to, confirms the correctness of these observations, and offers the following exposition of this sympathy. He observes that I have offered no explanation; but he thinks it admits of one, and says, "I have observed, for instance, that in nearly every case, where the breasts become tumid and painful, the concreted pseudo-membranous substance, (if any is cast off,) is thick, and of much consistence; and in those where the mammæ do not sympathize, it is usually thrown off in the form of a thin membrane. In the former case, the uterus is much more distended, approaching the condition of early pregnancy; and we may *presume* that this state would be most

[1] It is to be lamented that gentlemen who quote the opinions of others, should not give such opinions fairly. Dr. Eberle, in "offering some remarks upon the pathology and treatment of dysmenorrhœa," (Western Journal,) states that "some writers, and among these, Dr. Dewees, seem to think that this complaint depends invariably on the formation of a pseudo-membranous substance over the internal surface of the uterus, by which the orifices of the menstrual exhalants are obstructed." Now it is only necessary to compare the text with this quotation, to absolve the author, at least from such a sweeping assertion, and to prove how carelessly Dr. E. must have read,—for I neither say that the formation of a membranous substance is essential to dysmenorrhœa, or intimate that "the orifices of the menstrual exhalants are obstructed." I mention that either a membranous substance or coagula are formed, and I believe that this obtains in all cases of uncomplicated or idiopathic dysmenorrhœa. When pain attends the menstrual process, without either of these products, it will be found that the patient is labouring under the "irritable uterus," and not dysmenorrhœa.

apt to awaken the uterine sympathies, and thus to excite the mammary glands."

To this *explanation* we would urge the following objections—first, that we have never observed the connexion between the condition of the mammæ, and thickness or thinness of the "pseudo-membranous substance;" for we have known this sympathy to take place where the quantity discharged was very small, and we have known it absent where this product was abundant, and where even small cogula were discharged. Secondly, because Dr. E., himself, admits the same thing, virtually: for he says, that "in nearly every case where the breasts become tumid, the concreted pseudo-membranous substance, (if any is cast off,") &c. Now, is it not evident, that the doubt conveyed by the words "if any is cast off," implies that he has seen instances of mammary sympathy, without this substance, (either thick or thin,) being cast off? And if this be so, what becomes of his *explanation*, since it altogether depends upon the thickness and consistency of the false membrane? Thirdly, because we do not consider the substitution of one inexplicable phenomena for another equally inexplicable, as an *explanation*—for suppose this membrane should irritate the uterus so as to cheat it into the belief, that it was "approaching the condition of early pregnancy," has he informed us, or does any body know, how this change is effected in the mammæ, by every conception? We are all aware of the fact but we can offer no "*explanation*" of it. Fourthly, assuming Dr. E.'s "explanation" to be correct, does it inform us why such cases are the most easily relieved?

Besides the alternate or labour-like pains, just mentioned, there is almost always a permanent one in the back, hips, and loins, which continues until the alternate pains have ceased; indeed, this aching pain sometimes precedes the other, and announces the discharge to be at hand.

In another place, I have declared, that the menstruous fluid is the product of a secretory process;[1] I have there given my reasons for this opinion; I now assume it as a principle; and upon this principle, attempt to account for the formation of the membranous production, so often yielded in dysmenorrhœa. But before I attempt an explanation of the formation of this membrane, I must again direct attention to a very remarkable circumstance in the character of the menstrual blood, namely, its not possessing the property of coagulation. From this, it appears that the blood, or a part of it, has suffered some change by the action of the uterine vessels; and that this change has been imposed upon the coagulating lymph by the process of secretion. I have assigned reasons for this change, when speaking of menstruation.[2]

[1] See p. 94, et seq.

[2] See p. 93.

Now, it is not difficult to suppose that the uterus, like every other organ, may have its functions or actions changed or altered: in consequence of which, the texture of the coagulating lymph, instead of being so subdued as to prevent coagulation, as it is wont to be when the uterine secretory action is perfect, remains nearly the same as when it entered this viscus; except that it may be attenuated, as in some inflammatory diseases: and it will, from this imperfect elaboration, be thrown into the cavity of the uterus without being dispossessed of the power of separation, and of coagulation.

It is poured into the uterus in a very gradual manner; and from this circumstance, may tarry there sufficiently long to separate into its constituent parts; for it now resembles common blood; the coloured part, or red globules, from their greater weight, will leave the imperfectly subdued coagulating lymph, and fall to the bottom of the uterus, and, sooner or later, be discharged; while the coagulating lymph, either in part or altogether, will be left to spread itself over the internal face of the uterus, and there quickly assume, as is usual with it when in contact with living parts, the appearance of a membrane.[1] This membrane will be, to all intents and purposes, an extraneous substance to the uterus; and will sooner or later urge it to repeated contractions, to throw it off; which contractions will be painful, like those of labour: hence, the pain in this kind of menstruation.

Dr. Eberle considers this explanation as contrary to sound pathological principles, and to the import of the essential phenomena of dysmenorrhœa, and proves this by ringing the changes upon the word "Impaired." Now, this word, as connected with the other portions of the text, does not mean "weakened," but merely *altered*, or *changed;* and if this explanation of its meaning be accepted, Dr. E.'s objection to the pathology offered, is not perhaps so irreconcilable as he appears to think. Besides, we must again accuse the Doctor of reading carelessly, or else of wresting the meaning of our words. He adds, that "Analogy also affords us good grounds for this opinion;" (namely, that in dysmenorrhœa, the uterine system approaches to a state of inflammation.) "Lymph is never thrown out so as to form membranous concretions, except from *inflamed or highly irritated* surfaces."

To the objections of Dr. E., we would observe, first, that we have never pretended to point out the pathological condition of the internal surface or other portions of the uterus, in dysmenorrhœa

[1] Morgagni explains the production of the membranes formed in the case he relates, differently, but perhaps not more satisfactorily. He says, "It was easy to conceive, that the viscid particles of the serum of the blood, issuing from the uterine orifices of the vessels, which had formerly been discharged in the form of a fluor albus, were now become more viscid, and adhered to all the internal parietes of the uterus, and by this means were concreted into a polypous membrane." Epist. xlviii. art. 12.

—all we have advanced is, that some change was effected in the secretory surface, and that, instead of the fluid discharged during the menstrual period presenting the appearances it is wont to do in the healthy condition of this surface, it permits a separation of its constituent parts, thus proving some change or imperfection in the action which produced it. Now, whether this be owing to inflammation, or high irritation, we have neither declared nor denied. Secondly, we have in no part of this chapter declared, intimated, nor do we believe, that "lymph" alone is poured out, as from inflamed surfaces, in dysmenorrhœa: on the contrary, we have expressly stated, that the lymph and colouring matter of the blood were both present in the healthy menstruous fluid—but that in healthy menstruation, the lymph was altered by the process of elimination, as it no longer coagulated; but not so in dysmenorrhœa. Thirdly, that Dr. E. is at variance with himself; for, he first attempts to show, that the phenomena of dysmenorrhœa, declare, that "the whole uterine system is *morbidly increased*, and that it approaches to the state of inflammation." To prove this, he says there is a "sense of fulness and pain in the pelvis, loins, and thighs—the accelerated, and often tense pulse—the hot and feverish skin, decidedly indicate a *congested* and irritated state of the pelvic organs." We shall not remark at present upon the fidelity of this history of symptoms, as the assumption of their truth will best at this moment serve our purpose—which is, to show what we have just asserted, that Dr. E. is at variance with himself.

Now we will ask any candid person, at all conversant with pathology, whether the Doctor has not made out clearly, that in dysmenorrhœa there is both an *inflamed and highly irritated surface*, in the uterine cavity. Yet he wants to prove that there is no lymph poured out; because, "lymph is never poured out so as to form membranous concretions, except from inflamed or highly irritated surfaces!"

The treatment of this complaint consists in the temporary, and the permanent; the first consists in the administration of remedies to relieve pain at the commencement of and during the attack; and the most efficient, and uniformly certain for this purpose, that I have yet discovered, is camphor in sufficient doses; the following is the formula I generally use:—

℞. Gum Camphor. ℈i.
Sp. vin. rect. q. sf. pulv.—Adde
Pulv. G. Arab. ʒi.
Sacch. alb. q. s.
Aq. Cinnam. simp. ʒi.
M.

One-half of this draught is to be given the instant pain is experienced; and if it be not relieved in an hour or two, the other

half is to be given—this quantity, however, is not always sufficient to subdue pain; in this case let the mixture be repeated—or the same quantity of camphor may be finely powdered, and given in ten grain doses every hour, mixed in a little syrup of any kind, until relief be procured. Sometimes the stomach is much deranged in this complaint, and will suffer nothing to remain upon it; when this happens, I order twenty or thirty grains of camphor to be rubbed down with a few drops of the spirit of wine to a very fine powder; one drachm of laudanum; and three ounces of thin starch or flax-seed tea, as an injection per anum. The quantity of this medicine may be varied according to the exigency, and may be repeated agreeably to the necessity of the case. Should this be too suddenly discharged, or fail in giving relief, it may be repeated.

Opium, in various shapes, has also been administered; either alone, or in combination with camphor, or ipecacuanha. The ergot has also been recommended. I have tried it; and, with one exception, it has failed. It must, however, be declared, that my experience in the use of this substance has not been extensive; and even in the few trials I made, perhaps I may not have given it a fair chance. These doubts have lately arisen, from two or three of my friends telling me it had been entirely successful with them; and, also, from a case of success occurring within a short time in my own practice. As the case was unusual, by combining with it a rare occurrence, namely, menorrhagia, I will relate it.

In October, 1825, Mrs. —— applied to be relieved of painful menstruation, together with an immoderate discharge of blood. The pain appeared to be produced by the discharge of coagula; at least there was no appearance of membrane in the fluid she passed. She also had leucorrhœa to a considerable extent. I ordered her the ergot in the following form:—

℞. Pulv. secale cornut. ʒss.
Ext. gentian. ʒi.
M. f. pil. xv. One every morning, noon, and evening.

She began the use of pills about a week after a period, and continued them until the next made its appearance. At this time she found herself much relieved, both as regarded pain, and the quantity discharged. The next period was still better; and since, she has had no farther trouble. Warm bath, pediluvium, and bleeding, have also been prescribed; but nothing has succeeded with me so well as camphor.[1]

[1] In severe cases, or those which resist the camphor or laudanum, might not the hydrocyanic acid be useful?

I am sorry to say, that I cannot answer this query in the affirmative at present.

The radical treatment consists in the exhibition of remedies in the interval, with a view to prevent the recurrence of pain—the one which has proved most successful, is the volatile tincture of guaiacum, given as directed in suppressed menses. The same regard to the state of the system as is there recommended, is also here insisted on. Perseverance, for two or three months, is oftentimes necessary. I think I have observed that this medicine is more decidedly useful, where the first menstrual period, after its use, is more than usually severe. This has been pretty uniformly found a favourable sign.

Though the tincture of guaiacum has been generally successful, it has not been uniformly so.[1] In two instances where it failed, the ext. cicutæ succeeded: and in one other where it had not been successful, the tincture of cantharides gave perfect relief.

I have never met with a case of fruitfulness where there was a discharge of membrane, though Morgagni relates one in which it was otherwise.[2] As this is a rare and curious case I shall take the liberty of introducing it. "A noble lady, of tall stature and good health, had suffered several miscarriages in the early part of her pregnancies; but between these miscarriages, she would carry her children to the full time. She sometimes had twins, and very difficult labours. She was also troubled slightly with leucorrhœa. Of this she had become well about her thirty-fourth

I have used this substance but a few times, and then without the slightest advantage.

The acetate of ammonia has been vaunted in this complaint; but it has entirely failed in the two or three trials I have made of it, though given in much larger doses than has been recommended. I have lately seen the muriate of ammonia much lauded in the paroxysms of this complaint; but have not yet made trial of it. The doses are from eight to ten grains, and taken pro re nata.

[1] This remedy in the hands of others, I learn has not been equally successful. I can only account for this in one of two ways: first, they have not, perhaps, prepared it as directed; secondly, and the most probable, they have not persevered sufficiently long in its use; for it is still successful in most cases, in my hands.

[2] It may be well to correct an error of quotation in this place, that has crept into a recent work. It makes me say, that no woman can conceive who is labouring under dysmenorrhœa; now, this is no where advanced by me. Yet I do not hesitate to say, that so far as my experience goes, I have never met with an instance of fruitfulness, where this membranous product was expelled: I therefore fully agree with Dr. Denman upon this point. Dr. Mackintosh seems to have fallen into a similar error, when he thinks Dr. D. wrong upon this point; for Dr. D.'s declaration is precisely what we have stated above, namely, that a woman does not conceive when this membrane is produced—but does not say, that no woman conceives who is labouring under dysmenorrhœa; for to dysmenorrhœa, this membranous production is not a sine qua non; and where this membrane is not formed, impregnation may occasionally take place.

Dr. Ryan renders this more probable than ever; he relates two cases, wherein he says the dysmenorrhœa was aggravated by marriage. These were instances of pregnancy occurring during its existence. But he observes, that neither discharged this membrane. So that the broad assertion remains uncontroverted,—that pregnancy does not take place, where *this membrane is discharged*.

year; but was afflicted, at each return of her menses, with pains resembling labour. About the second or third day she would discharge a membranous body of a triangular form, and which appeared to have filled up the whole of the cavity of the uterus.

"The exclusion of this substance was followed by a great lochial discharge; it did not always come away whole; but when this happened, the lochia also followed. As the patient had abstained for some time from intercourse with her husband, and had suffered much, she began to think it would be more advantageous to her, if she could be free from the pains for nine months at least, and determined to lie alone no longer; wherefore, in the month of March, 1824, she became pregnant, but only carried the fœtus until June.

"But in July, and the two following months, her menstrua flowed properly and without uneasiness. In October, she had no return of her menses; and the pains returned in November, with the discharge of a membranous body. She continued to suffer from time to time after this, until the cessation of the menses put an end to it." Epist. xlviii. art. 12.

It is evident that impregnation took place in the instance above named; yet the patient miscarried at the third month, and was not made to conceive afterwards. It therefore forms only an exception to the rule.

I have seen a few instances of fruitfulness where there was painful menstruation, without this membranous production, but where a few small coagula were discharged. But such cases are rare.

Does this disease reside in the ovaria, or in the secreting surface of the uterus? I believe it has its seat in the latter; and that its being unfavourable to impregnation, is not owing to any influence it may exert upon the ovaria, (for I have reason to believe that ova have been impregnated, but not finding the uterus in a condition to receive them, have perished:) but to either the imperfect or the non-formation of the decidua. I believe the same surface furnishes both the menstrual secretion, and the efflorescence called the decidua; it would seem then to follow, if it performed the first of these offices imperfectly, it would also the latter; and, consequently, the ovum would perish for want of a proper nidus.

This opinion is strengthened by the facts, that so soon as this wrong action is changed, the woman is instantly capable of being impregnated; or in other words, fecundation becomes successful; and also by the influence of camphor, a temporary change is induced in the secerning vessels of the uterus, and the formation of membrane is prevented. Were it necessary, I could illustrate both of these positions by very many cases; but, as it is the most

remarkable I have met with, I shall confine myself to one of the former.

In 1791, I was applied to by a lady, who had always suffered at her menstrual periods; and who, at such times, discharged a number of membranous portions. She had been married nineteen years without being impregnated. After due preparation, for she was very plethoric, I put her upon the use of the tincture of guaiacum; in this she persevered for three months. The first period after she commenced the use of this medicine, was one of prodigious severity; so much so as to make her resolve on abandoning it. I, however, persuaded her to persevere. The next period was better; and the one after was without pain. She conceived immediately after, and was delivered, in due time, of a fine girl. She took twenty-four ounces of the tincture.[1]

As this disease is one of great interest—one, to use the language of Dr. Good, "the frequent returns of which imbitter the life of the patient, and effectually prohibit all hope of a family," we feel it a duty to give to our readers the advantage of every suggestion for its relief that may come from a respectable source. We therefore copy Dr. Mackintosh's views upon this subject in his own language.

"It always appeared to me that there might be some mechanical cause for dysmenorrhœa; but it was not till the year 1823, that I first entertained a belief it might be owing to the small size of the *os uteri*. In that year a medical friend presented me with a preparation of the uterus and its appendages, in which the os uteri was so small as scarcely to admit a hog's bristle; since that period I have had many opportunities of investigating this interesting subject, and have now obtained many preparations taken from the bodies of individuals who died of different diseases, particularly of phthisis, and whose histories prove that they had laboured under dysmenorrhœa from the very beginning of their menstrual lives. In these preparations of the uterus, the orifices, instead of being shaped like the mouth of the tench fish, are either circular or nearly so, and some of them are so small as only to allow a bristle to pass; others are a little larger, admitting a small silver probe.

"I am far from alleging, however, that dysmenorrhœa is *always* produced by a small os uteri; on the contrary, I believe it may occasionally depend on inflammation of the lining membrane of the uterus, as well as on inflammation in the substance of the cervix uteri, and on the encroachment of tumours diminishing the caliber of the passage through the cervix. I only maintain that the condition of the *os uteri*, above described, ac-

[1] We could furnish very many instances of similar success from the use of the guaiacum--indeed, more than a hundred.

counts satisfactorily for many cases of dysmenorrhœa; so far as my investigations have extended, I am inclined to say, it will account for the majority; although in candour, I must mention, that one preparation in my possession appears to invalidate the evidence afforded by the others; in it, the mouth of the uterus is very small, and yet the woman to whom it belonged had had several children; she died in a public establishment, but the history of her menstrual life is unknown.

"By this condition of the *os uteri*, not only are all the phenomena which take place in dysmenorrhœa most satisfactorily accounted for, but also the intractable nature of the disease, and the unsatisfactory result of every mode of treatment hitherto recommended. The menstrual discharge, after it is secreted in the uterus, cannot readily escape, in consequence of the small size of its orifice: distention of the organ is the consequence, which, by exciting the contraction of its fibres, produces uneasiness and pain in the pelvic region. When the *os uteri* is very small, and the secretion viscid, or mixed with coagulated blood, shreds of membrane, or organized masses, then the distention becomes more considerable, and stronger contractions are excited. Sometimes the action of the abdominal muscles is called into play, and bearing down or expulsive pains are produced, resembling in every particular the pains of labour, and continue till the expulsion takes place. Mr. Burns, in speaking of the disease, states, that it 'sometimes produces, *besides uterine pain*, spasmodic affection of the bowels, or *violent bearing down efforts of the abdominal muscles*, as if it were intended to expel the womb itself.'

"During these periodical attacks, inflammation of the lining membrane of the uterus, if it do not already exist, is sometimes excited, and in the end the sufferings occasion an entire break-up of the constitution. That dysmenorrhœa should be so intractable, and the action of remedies so very unsatisfactory as to render the disease an opprobrium to medical science, are not to be wondered at, if my views be hereafter found to be correct. Before I had any opportunity of putting these opinions to the test of experiment, they also appeared to me to be corroborated in a very striking manner by two circumstances:—1. By the action of the *ergot of rye*, which increases the force of the uterine contractions, quickly expelling the contents of that organ, thus shortening the patient's sufferings materially; 2. By the admitted fact which has been already mentioned, that women affected in this manner rarely, if ever, conceive. The small size of the *os uteri* renders impregnation almost an impossibility, by offering a mechanical obstruction to the passage of the semen into the cavity of the uterus, where it is proved it must reach, by the accurate experiments of that ingenious and distinguished physiologist, Dr

Blundell of London, as well as by other facts which it is unnecessary to mention in this place.

"These views appear to me to be farther supported by several preparations in my museum; in one of which the cavity of the uterus is divided into two compartments, by a strong transverse adhesion; in a second, occlusion of the passage exists at the upper part of the cervix, which has every appearance of having been produced by the irritation of a polypous tumour; and in a third preparation, the os uteri became sealed up by inflammatory action; on dissection, the uterus was found enlarged, and contained about two ounces of puriform matter.

"*Treatment of Dysmenorrhœa.*—After the facts and observations above mentioned were collected, my mind became occupied with devising the best means likely to cure the disease. Mechanical irritation appeared to be the only remedy; but I hesitated for some years to carry it into execution, or indeed, to propose it, beyond mentioning it in my lectures, till the case of the young woman affected with amenorrhœa, [quoted at page 109,] presented itself in the year 1826. Since that period I have treated fifteen cases of dysmenorrhœa, by dilating the *os uteri*, and have permanently cured all the patients; among these the two cases of amenorrhœa, formerly mentioned, are not included.

"Of the fifteen patients, eight were either young unmarried women, or living in a state of widowhood; seven were married, and living with their husbands: of these seven, four subsequently fell with child.

"The instruments employed to produce the dilatation are the common metallic bougies, of different sizes, from that of the ordinary small silver probe to No. 8, or 10. The operation is performed, (the patient lying in the position in which women are usually delivered in this country,) by introducing the fore-finger of the left hand till it reaches the os uteri, for the purpose of directing the instrument to the part, which is then to be gently insinuated by a rotatory motion, till it arrives at the fundus of the uterus; much force ought not to be employed, and little or no pain is produced by the operation. The unpleasant consequences which sometimes take place in treating stricture of the urethra by similar means, viz. shivering, followed by fever, occurred in two instances; the fever, however, was slight, and soon terminated by copious perspiration; and in these, some days were allowed to elapse, before the instrument was again used. In two of the cases, the os uteri was sufficiently large, and well shaped; but the passage became so narrow in the course of the cervix of the uterus, that it required long-continued efforts before the smallest instrument could be introduced; but by perseverance the obstructions were at last removed, and the patient cured. In one of these last two, menstruation was performed without pain till

after marriage, when dysmenorrhœa occurred. The other was a young unmarried woman, who menstruated with ease for several years, but after long exposure to cold and moisture, the menstrual discharge became for a time suppressed, and ever after was performed with pain. The late Dr. Kellie, of Leith, was also consulted about this case, and had I not been encouraged by his advice, I should not have attempted the operation; as on the posterior lip of the *os uteri*, several small elevations, like incipient tubercles, were felt. This woman called upon me eighteen months afterwards in good health, and stated, that she had not felt any uneasiness, or experienced any bad symptoms since the dilatation was effected.

"I will not doubt the accuracy of these cases, but only inquire what became of the recrements of the several discharges of the menstrual fluid, which must have accumulated, one would think, after years of regularity, though not of ease, at these times—I ask, what had become of them? It is too much to suppose it absorbed, though some countenance is given to it, in cases of imperforate hymen, as when the patient has been operated on, so as to discharge what was accumulated; the quantity thus discharged has been much less than the aggregate quantity secreted at the regular periods for years. Suppose a twelvemonth to have elapsed since the female began to complain, and we allow for each menstrual period, say four ounces, there would be about 50 ounces thrown off, a quantity too great to be absorbed, from one menstrual period to another.

"A lady, the subject of one of the fifteen cases, was also perfectly healthy, and menstruated easily till the period of marriage; but her health became impaired soon after, in consequence of her monthly sufferings. On making an examination, an enlargement was discovered about half the size of a chesnut on the posterior surface of the cervix of the uterus. I undertook the operation in consequence of the urgent entreaties of her friends, who happened accidentally to know of the happy results which had attended it in other cases, but I held out little hope of being able to do any good: notwithstanding which a striking improvement in her health soon took place; and, this, in the end, proved to be one of the most successful cases, for menstruation became easy, the tumour rapidly declined, and upon making an examination in about twelve months afterwards, it could scarcely be felt.

"None of the women operated upon had suffered for a shorter period than two years; some for three or four; and others for ten. Of the four who subsequently fell with child, one had been married between seven and eight years, and was reduced to a shadow from constant ailments; but after the operation, she recovered her health, strength, and flesh, and became pregnant at about

the termination of nine months from the date at which the bougie was used for the last time.

"Another had been married three years, and had suffered considerably in constitution, with severe nervous symptoms every month, till at last she became entirely obstructed; and the abdomen being enlarged, I was consulted upon the supposition that she was five months gone with child. From some circumstances which it is unnecessary to mention, I entertained a suspicion that she had deceived herself; and upon making an examination, when she supposed herself to be in the seventh month, ascertained beyond all doubt that this was the case. In the process of time, the operation was performed, and the passage completely dilated; some months afterwards, impregnation took place, and I have since delivered her of two children at separate births.

"A third case is that of a lady who had been married two years, and who had had painful menstruation from the first appearance of the discharge; she was in a miserable state of health; had taken a great deal of medicine, but only with temporary relief. Impregnation took place after the third menstrual period subsequent to the dilatation.

"The subject of the fourth case had also been affected from the first of her menstrual life, and laboured under the impression that she was therefore never to have a child. After dilating the passages with No. 6 bougie, menstruation took place with so much ease, that she supposed herself quite cured, and would not again submit to the operation. Several months afterwards, however, she felt a return of the pain; the operation was again had recourse to, and the dilatation carried as far as it could be effected with No. 10, which was accomplished two days before her expected period. Menstruation took place freely, and without the slightest uneasiness; she subsequently fell with child, and was delivered of a boy."

We are certainly much indebted to Dr. M. for his novel illustration of dysmenorrhœa, though we cannot suppose his pathological views to be applicable to all cases of this complaint. We shall therefore take the liberty to declare, that his history of this complaint amounts to no more than as a variety of dysmenorrhœa, and that this variety is most probably but a consequence of the previous condition of the internal cavity of the uterus, or of its neck; namely, the result of previous irritation or inflammation; though we are not prepared to deny, that it may have existed as an idiopathic condition of the neck of the uterus.

Our reasons for thinking that this "mechanical cause of dysmenorrhœa" is but a rare and secondary cause, are, First, that in many instances the woman menstruates regularly and healthfully for a long time; but from exposure to cold; upon marriage; after an abortion, or sometimes a labour, this painful condition of

the menstrual process takes place—in neither of which do we see how the os tincæ can be so reduced in size, as to be only sufficient to transmit a bristle; unless we suppose that either of the causes named is capable of producing so much irritation or inflammation, as to cause the disorganization just named; and, if this be admitted, the dysmenorrhœa thus produced is but a consequence of the previous irritation or inflammation. Secondly, if his first reason be admitted, it must give us strong grounds for belief, that the degree of irritation and inflammation capable of disorganizing the neck of the uterus, might also be sufficient to induce painful menstruation without this disorganization; and that when this disorganization has taken place, it could only add to the difficulties, and not be the exclusive cause of them. Thirdly, that this last suggestion is rendered not only highly probable, but is almost demonstrated to be true, by the effects of camphor in temporarily relieving pain; and by that of the guaiacum, permanently removing it—for we cannot suppose that the action of either of these substances would remove the "mechanical cause of dysmenorrhœa." Yet, as we have just observed, we have seen very many cases of dysmenorrhœa removed by the guaiacum, and impregnation follow in married females.

Nevertheless, we gratefully acknowledge the value of Dr. M.'s cases and his mode of treatment; and we shall certainly attempt to follow it in cases that are of unusual obstinacy, and where the patient will yield to the remedy.

We are, however, far from thinking that Dr. M. strengthens his cause by citing the action of *ergot* upon the uterus, as a proof of the smallness of the os uteri; or by a reference to the experiments of Blundell. For the benefit derived from the use of the *ergot*, (if any do arise,) is from its increasing the power of the fundus and body of the uterus, to expel the foreign body that is within it—and which only proves an increase of power in these portions of the uterus, and not in any way under such circumstances, that the neck of the uterus is narrower than natural. And, as regards the experiments of Blundell, they are far from being confirmative of the necessity of the presence of the semen in the cavity of the uterus, that impregnation may take place, except, perhaps, to those who have this particular hypothesis to sustain.

Sect. V.—5. *Of the Decline of the Menses.*

The nearer a woman approaches her forty-fifth year, (*cæteris paribus*,) will be the risk of some irregularity in the menses: and as this period is more frequently the one at which any latent disease of the uterus shows itself, it is always looked forward to

with much anxiety by women. Indeed, so replete is this time with horrors to many, that we may very justly suspect apprehension to be the cause of some of the distressing symptoms which sometimes accompany this interesting process of the human uterus.

In delicate women, and especially those who have lived idly, this period of life arrives earlier than those of a contrary constitution, and opposite habits. We have already noticed, in our section on suppression, that this change sometimes takes place at a very early period of life, and this without leaving any injurious consequences behind it: and, on the other hand, we find many cases on record, where this discharge had continued with regularity to a much longer period than the ordinary one. Gardien mentions a case which fell under his own notice, where this evacuation continued with great exactness, until beyond the seventy-fifth year; others, still more uncommon, are mentioned by various writers.[1]

The reason of this discharge leaving the woman at this time of life, appears to be founded in the highest wisdom and beneficence; it is to prevent child-bearing beyond that period at which the mother would be capable, from the common chances of human life, of extending her care to her offspring, and, consequently, submitting her child to the doubtful management of strangers, or subjecting it to the waywardness or caprice of those who could not feel a parent's affection, nor yield a mother's devotion to its necessities at a time when its helplessness would most require the kindest offices.

This change is sometimes effected so silently, that the woman scarcely notices her altered condition; at others, its approach is so gradual, as not to attract observation, until the diminished quantity gives warning that it is about to take its leave for ever; while, again, the irregularity, both in period and quantity, may be such, as justly to give alarm, as well as to produce the most serious danger.

But, as a general rule, it may be observed, that when the woman has attained about her forty-fifth year, she finds her menses to become irregular, both in the quantity of fluid evacuated, and in the periods they observe; being sometimes in advance, and at others not appearing until long after the accustomed time. The woman also finds some alteration has taken place in her general health; she becomes pale, debilitated, and nervous; arising, how-

[1] I have had, very lately, a lady under my care, who menstruates with the most perfect regularity; though she had laboured under a prolapsus of the uterus to a great extent for several years. She is now in her sixty-fifth year. Her uterus is now effectually supported by a pessary, which has much improved her general health.

ever, for the most part, from the too frequent returns of this discharge, or its too great abundance.

At this time, also, the woman sometimes becomes the victim of a strange illusion, should the menses not have returned for several periods; for she now supposes herself to be pregnant, as her abdomen enlarges, as do the mammæ; her appetite becomes capricious, or she has strange longings, &c., the whole of the rational signs of this condition being present, even, in her imagination, to the motion of the child. This delusion is most common to women who marry late in life, and who are very desirous of offspring; more, sometimes, we fear, from an anxiety to give a proof of their youthfulness, than from a wish to become mothers, at their time of life. But this youthful hope is soon to be destroyed—and, perhaps, for ever. For now the breasts lose their intumescency; the morning sickness vanishes; the swelling of the abdomen subsides; the imagined stirrings of the fœtus cease, or the sensation becomes so unequivocal as to satisfy that it arises from the movement of wind; and, to put every thing beyond hope, the menses return in overwhelming quantity, and thus the poor woman but too certainly becomes the butt of the unfeeling and the ridicule of the unthinking. It is, therefore, highly proper, that practitioners, and especially the younger part of them, should be put upon their guard in respect to this condition of the patient, and not too easily yield credence to all her wishes may dictate, or absolutely to treat as an impossibility, a circumstance of which there is occasionally an example.[1]

It seems that the apprehensions of this period of life have arisen mainly from the notions entertained of the final cause of the menses: namely, that it gives vent to peccant humours. But females should be made to know, that all this is purely the theory of the vulgar; as the menstrual blood is formed from the general mass; and, consequently, if that be pure, the other will be; therefore, the idea is altogether ill-founded. But unfortunately, whenever this discharge is less abundant than usual, the most serious fears are entertained, that there will be a retention of a portion, which will cause disease, either in the uterus itself, or in some other part of the body: hence, a diminished menstruous secretion is always more alarming to the female, than an unusual flow. But it may be well to remark, that there is a great difference between the cessation of this discharge, and the suppression of it. In the one instance, it is an event which nature has designed should take place, and is effected altogether by arrangements of the system itself; and, of course, one of its natural processes; in a word, as much so as its commencement: but the suppression, from

[1] Women have conceived at much later periods, and given birth to fine offspring. One we knew at sixty. *One case I witnessed.*

some morbid agency, is in direct opposition to the intentions of nature, and will, of course, be followed by some baleful consequence, if it continue beyond a certain period.

The vulgar error, "that women at this period of life are always in danger," is replete with mischief to the suffering sex; and I feel it a duty to declare, that they are not necessarily more obnoxious to disease at this, than at any other period of their existence.[1] That they are sometimes liable to a disease at this time, and that disease one of the most terrible in the long list of human infirmities, I admit; but must, nevertheless, insist, that *Cancer*, (the disease to which I allude, and the one so much dreaded,) is more rare in the uterus than in certain other portions of the body; for instance, the mammæ; and, perhaps, I am within the truth, when I say, that there are three instances of the latter, for one of the former. If latent dispositions to disease, either in the uterus or other parts, become active about this period of life, it is not because the declining menses excite them; but because the disease is slow in developing itself, and is, perhaps, kept in check for a long time, by the menstrual discharge serving as an important evacuation; especially when the uterus may be the seat of the complaint. In such instances, the foundation of the disease was laid, perhaps, at a time when the menses were the most perfect, as regards period and quantity; consequently, they could have had no agency in its production; but on the contrary, from its frequently relieving the engorgement of the vessels, served to keep it in subjection for a long time; not as a specific discharge, but as a mere depletion; or, in other words, that if an equal quantity of blood could have been by any other means as certainly abstracted from the uterus, the same favourable result would have followed. Coincidences in the human system are so common, that they are frequently mistaken for cause and effect: hence, the cessation of the menstrual discharge, and the appearance of scirrhi and cancers, are considered as cause and effect.

At this period of life, nothing will so effectually secure the woman against injuries which may arise from the irregularities of the menstrual discharge, as a well regulated regimen. By regimen, in this place, we would wish to be understood, not only eating and drinking, but exercise of both body and mind, including the proper government of the passions; in a word, every thing which relates to both moral and physical existence.

[1] Indeed, it would seem that this period of female life is freer from diseases causing death, than almost any other. By some late observations made on the bills of mortality in France, by M. Boiniston of Chateauneuf, it appears that fewer women die between the ages of forty and fifty, than men, or indeed at any other period of their lives after puberty. And, farther, that if this change is effected without much disturbance, that they live not only longer than men, but are freer from morbid inconvenience.

A well ordered course of exercise in the open air in well selected weather, and great simplicity of diet, is of the utmost importance to the female at this period of life, and should never be neglected, if it be possible to indulge in them. By these means, the nervous, muscular, vascular, and lymphatic systems, are all preserved more certainly in equilibrium with each other, since they are the best calculated to ensure a reciprocation of their respective offices; and, consequently, to maintain that condition of the system termed health. Hence, the justness of the remark, that the women who live in the country, and exercise freely in the open air; who have fulfilled their duties scrupulously as mothers, by suckling their children agreeably to the views of nature; who do not goad their systems by over-stimulating food and drinks; who do not relax their bodies by too long indulgence in bed, have but little suffering at this period.

From this it will follow, that a milk and vegetable diet, together with pure water as a drink; regular exercise, not carried to fatigue; keeping the bowels open by well-selected food, as the fruits of the season in proper quantities; the bran bread, if necessary; but not by medicine, unless absolutely required. Governing the temper; restraining the passions, as well mental as animal, will largely contribute to the safety and comfort of this period. All that we have just recommended, is calculated to place the system in a condition, by which it shall preserve its various forces; have its irritability diminished; its sensibility moderated; and pretty certainly prevent that condition of the blood vessels, most decidedly unfriendly to the general health at this time, called plethora. And, though last, not least in fair estimation, is an attention to cleanliness. The external organs should be washed with lukewarm water at least twice a day, and the whole body once a week, by going into a lukewarm bath. In using the bath, care should be taken to come out of it as soon as the purposes of cleanliness are answered.

Our next concern is with the derangement of the discharge at or about the period of cessation; this will consist, 1st, in a diminution of the proper quantity; and 2dly, in an excess of it. As regards the first, I have already said enough when treating of the suppression of the menses; and, with respect to the second, it must be treated according to the rules prescribed for the management of hemorrhage from the uterus from any other cause; that is, first, to diminish the quantity discharging; secondly, to prevent an excessive return.

The first indication is best fulfilled by rest; by cool air, and drinks; by cold local applications; by the acetate of lead and laudanum; and by the use of the tampon.[1] We should imme-

[1] See Chapters on Uterine Hemorrhage, and Menorrhagia.

diately confine a patient so circumstanced to a horizontal position; and strictly forbid motion of every kind, even turning in bed. We should admit cool air with freedom where practicable; and give neither nourishment, nor drinks, except they be cooled—the latter may even be iced. Cold, applied to the abdomen, is frequently useful in excessive discharges of this kind; the best mode of applying it is by large bladders not quite filled with water in which there is ice, if it be in summer, or during hot weather; cold water alone will be sufficient, if it be winter: during the use of this, care should be taken that the feet and legs be kept warm. We should also give, by the mouth, two or three grains of the acetate of lead, every hour or two; guarded with a sufficient quantity of opium, or laudanum, or a scruple of it with a drachm of laudanum, and two or three ounces of water, as an injection—this is to be repeated pro re nata. And, should these not control the discharge upon fair trial, recourse must be had to the sponge tampon. I have repeatedly seen the discharge of blood at this period of life, so enormous and so rapid, as to threaten almost instant exhaustion. When thus excessive it can only be met successfully by the most prompt application of the most efficient remedies.

Whether this disease show itself in the rapid expenditure of fluid blood, or in the repeated expulsion of large coagula, it must be opposed by the same remedies—these two conditions present no difference of indication, nor any essential difference in the complaint itself: the former, however, generally requires more prompt interference than the latter, as more blood is expended in a given time.

The second indication must be fulfilled by blood-letting; by purgatives; by hemlock; and by tonics. Notwithstanding the immense loss of blood, which sometimes takes place suddenly at each period or return of this hemorrhage, it does not prevent the almost continual draining off of this fluid, even when its violence is much abated; hence, we sometimes find a greater or less discharge almost always present: this renders the woman not only feeble, but keeps her mind in a state of extreme apprehension, from one period to another. These two causes, namely, the excessive discharge, and mental anxiety, keep the system in a constant state of excitement; and if the pulse be examined, it will be found quick and corded. We are, therefore, under the frequent necessity of abstracting a few ounces of blood during the interval of each discharge; especially towards the approach of the period the disease has assumed for its movements,—this, however, varies in different individuals; and in even the same individual, if any error have been committed in either diet or exercise. But when all things are equal, we find the period pretty certainly marked; and it may be every three or four

weeks; or sometimes even longer. I have known two or three violent cases, where the discharge returned every two weeks.

To aid the vessels to contract, we should confine the patient to a strictly vegetable diet; or to a diet of milk, if this should agree with her: all kinds of liquor, and spices, should be forbidden; and exercise absolutely prohibited. The patient should sleep upon a mattress; and should be directed to repose herself upon it or a sofa, as often as she may feel a little weakened, or fatigued by sitting up. The feet and legs should, however, be kept warm; and, if habitually cold, should be rubbed two or three times a week with spirit or brandy, in which a quantity of the flour of mustard is mixed, or use the mustard bath. (See note to page 150.)

The bowels should be kept open, by diet, if possible, as just suggested, or by the exhibition of some mild purgative, as rhubarb, sulphur, magnesia, or any of the neutral salts. Against the use of aloes there is much clamour; but, I have some reason to believe, without just cause. I do not wish by any means to determine the point at this time; as my experience in its use is yet too limited to decide with certainty, though my favourable impressions continue to be strengthened. I think it proper, however, to direct the attention of the practitioner to it, that I may be aided by the experience of others, in determining the powers of this medicine—but I will relate what I know upon the subject, and leave it to the farther employment of this drug, either to confirm, or destroy my present opinion. Fothergill and Gardien are decidedly opposed to its use.

A lady, aged forty-two years, for whom I had prescribed almost all the known remedies for the hemorrhage under consideration, with very little benefit, was told by some old woman, that the hiera picra was a certain cure in her complaint: she mentioned this, and I very candidly stated my own, as well as the general prejudices against the principal ingredient in this compound; but at the same time, observed, that as the old woman who had recommended it, cited the cases of two or three ladies who were relieved by it, and who were known to her, it would be easy to make the inquiry, and, if it were as she stated, it would be well to give it a trial, as every thing else had failed—the medicine was warmly recommended by these ladies; and she proceeded to make use of the old woman's prescription; which was half an ounce of the hiera picra to a pint of gin; of this a wine-glassful was directed at bed-time—it was taken, and the lady was completely intoxicated all night, and very sick next morning. Thinking the effects would next night be less severe, she again ventured on it, and with similar results.

She was now determined to abandon it, unless some less objectionable mode could be adopted for its exhibition—I prescribed it for her in the manner following:—

℞. Hiera Picra ʒij.
Ol. Caryoph. gut. x.
Sapo Venet. gr. xij.
Syr. Rhæi. q. s.
M. f. pil. xl.

One of these was directed every morning, noon, and evening, unless they should prove too purgative—this did not happen, as the patient was of an extremely costive habit. She soon perceived, after she began the use of this medicine, a diminution of the discharge; and by the time she had finished the pills, prescribed above, it was so much reduced in quantity, as to give no farther uneasiness. Since this case, it is proper to state, that several of a similar kind have been under my care, with the same results from the same means.

Several cases, of less severity, were entirely relieved after the use of the same formula: from this it appears, that in a number of cases in which this remedy has been prescribed, the patients got well, but the precise agency of the medicine remains to be determined by future observation. I am, however, convinced of the importance of pretty constant, but gentle purging, in this oftentimes tedious complaint.

One of the most successful general remedies I have employed, is the extract of cicuta; beginning with the minimum dose, and increasing it gradually, but at the same time as rapidly as the system will well bear. When decided marks of its influence, such as vertigo, headache, or sickness of stomach, begin to show themselves, the dose is not to be increased until they go off: when this happens, an increased dose may be given; and so on, until the complaint has so far yielded, as to render its farther exhibition unnecessary, or until we are convinced that it will not succeed in arresting it. I have thought this medicine most useful in those cases where the discharge was chiefly by coagula. I have used the secale cornutum in tincture, with great advantage, in some instances of this kind, though by no means so certain as in the more active uterine hemorrhages. A small tea-spoonful, every four or five hours, in sweetened water, has, in some cases, put an almost immediate stop to the discharge: in obstinate cases, it always deserves a trial.

No class of medicine has done so much mischief in the complaint I am now treating of, as tonics—and this from a wrong view of the disease in question; for it has been treated as one of debility; consequently, all the most powerful tonics have been put in requisition for its cure. Bark, steel, wine, and all the bitters have again and again been unavailingly tried, and oftentimes the patient abandoned to the ravages of this disease, because it could not be conquered by tonics—the opposite mode of treatment, with such views, would necessarily be considered as death to the patient, and of course, would not be employed.

I well recollect a case where three pounds of bark had been taken in less than two months, with a proportionate quantity of the elixir of vitriol, to the manifest increase of the disease: this patient was afterwards entirely cured, by an extremely low diet, gentle purging with neutral salts, quiet, and repeated blood-lettings. I must, therefore, caution the young practitioner against the use of tonics in such cases, though they may be attended by absolute weakness in the muscular system; for the state of the vascular system alone is to be attended to; and here a corded pulse must not be mistaken for a weak one, because it may happen to be a small one. But how shall we reconcile the contradictory opinions of the pathology of this complaint, and that of the suppression of the menses, with each other? It is insisted on by many that it is the *debility* of the extreme vessels that prevents the formation of the menses when they are suppressed; to overcome this, tonics and stimulants are advised. In the menorrhagia of this period of life, the cause of the too abundant flow is *debility;* and tonics and stimulants are here recommended to restrain the excess of discharge!

With respect to the preparations of iron, I have perfectly convinced *myself* that they can never be usefully employed during the active state of any hemorrhagy: in my hands they have never failed to do mischief: I have not used them, therefore, for many years, in the cases of which I am now speaking. The use of wine, I am also certain, has done mischief: it is port wine alone, however, that has any reputation in such cases; and this has arisen from its possessing a slight astringent property—but this must also be strictly forbidden. The bitters will fall under a slighter censure than the barks; because they are generally much less powerful: the same objections, however, attach to them, but in a minor degree.

Tonics are only admissible where there is nothing but debility to contend with: they may then be advantageously employed, in properly regulated doses. The diet may now consist of more generous living; and when well ordered, and properly pursued, may be looked upon as the best possible tonic.

Hitherto, I have been considering the severer forms of this complaint; I shall now say a few words upon the occasional irregularity of the menses, both as to period and quantity. The periods of return may be anticipated, or protracted; and the quantity may be very small, or more or less excessive; or it may employ a great many days for its evacuation, without the aggregate quantity being very great. I have constantly advised against any interference at this period of life, for mere irregularity, or irregularity with a diminished discharge; and for this plain reason, that no other inconvenience is experienced: and this is so trifling as not to merit consideration. But if, with the irregu-

larity, the discharge be too abundant, I treat it as directed already for hemorrhage, and try to prevent the recurrence, by bleeding a little before the expected return, a low diet, and purging with the neutral salts: these means rarely fail to give relief.

When a great many days are employed in the discharge, or as the women term it, "being almost constantly unwell;" and where the aggregate quantity may not greatly exceed the common monthly amount, I have frequently succeeded by the tincture of rhatany in two-drachm doses, three or four times a day. Gardien speaks in very high terms of the "rhatany." He thinks it merits more confidence than the alum, the sanguis draconis, the kino, the nutgalls, or catechu. He says that M. Ruitz used both the extract, and the decoction of the root of the rhatany.[1] The extract should be given in doses of half-drachm or a drachm. In severe cases, it may be given to the amount of two drachms a day.[2] Agreeably to M. Ruitz, the second or third dose rarely fails to produce the desired effect. The remedy should be continued some time after the discharge has ceased; but the quantity may be gradually diminished. To prevent the nausea which its bitterness sometimes creates, he advises the mouth to be rinsed with lemonade. Frequently bathing the parts with cold water; abstaining from too much exercise; and refraining from a stimulating diet, are of much consequence to the cure. The alum whey has often been useful in similar cases, and deserves a trial; the sugar of lead, in small doses with opium, given daily for some time, has many times answered every end.[3]

In every form of the disease under consideration, I have thought that very decided advantage has constantly resulted from injections of the solution of the acetate of lead thrown up the vagina several times a day;[4] except during so profuse a flow of blood, as to render the use of the tampon necessary.[5] It may

[1] We allude here only to such cases as have no organic lesion to account for their irregularity; we shall notice the other aberrations in other places.

[2] I have, of late, substituted the extract for the tincture, and give it in the following form:—

℞. Ext. Rhatan. ʒij.
Pulv. Rhæi. ʒss.
Syr. Rhæi. q. s.
M. f. pil. xl.

Of these, two are directed to be taken every morning, noon, and evening. It will be seen that I do not give it in any thing like as large doses as M. Ruitz, having found the quantity prescribed above to answer; I, however, should not hesitate to give it in much larger quantities, if it were necessary.

[3] The prejudices against the use of the sugar of lead appear to be ill-founded: we have given it very often, without witnessing any inconvenience, except in one instance; in this case it had been too long continued: it produced obstinate vomiting,

[4] The injections should be made of two drachms of the sugar of lead, to about a pint and a half of water.

[5] I lately succeeded in arresting a constant and long-continued flow, by injections of warm alum water. A half ounce of alum to a pint of water, was used.

also be proper to remark, that the sponge, or tampon, should not be suffered to remain within the vagina longer than ten or twelve hours at a time. When taken away, it should be carefully washed with soap-suds; and before it is again returned, it should be imbued thoroughly with vinegar; or, if it can be procured, with the pyroligneous acid: on this account, there should always be two pieces of sponge.

We have already adverted to the fact, that if there be any latent disposition in the system to produce scirrhus or to convert scirrhus into cancer, that it most frequently manifests itself at this period of life; hence, as before observed, the dread the woman has of the "disappearing of the menses." And this is especially the case when the uterus is the seat of the affection. We have also declared, that this manifestation of disease, at this time, is not the direct consequence of this change in the uterine surface; but because a powerful local means of preventing congestion in that organ is now removed by the menstrual fluid not being formed to relieve the engorged state of the uterine vessels.

It is highly probable that the congestion which always precedes the menstrual discharge, would continue to take place from time to time, though the menstrual secretion might be interrupted; and this congestion not being relieved as before, may induce a part already strongly disposed to diseased action, to take on inflammation, and hastily develope scirrhus or cancer. On this account, it is important that females should so regulate their regimen, as to prevent any thing like undue excitement in the arterial system: for this end it is necessary to reduce the quantity of nourishment; to adopt a properly regulated system of exercise, to govern or control moral influences. By these modes, we are persuaded that the predisposition to these dangerous affections can be kept long in subjection.

And, as the disposition of the system at this period strongly inclines to plethora, this state must be carefully guarded against, by every means capable of such an effect. Therefore, besides the rules suggested for the "regimen" of the woman, she must lose a few ounces of blood from time to time, if the pulse and other symptoms declare this state to be present, or if there be a well marked tendency to it. The blood may be abstracted from the arm upon common occasions; but if there be pain in the region of the pubes, back, hips, and rectum; and especially if this be of the lancinating kind, accompanied by a sensation of heat about the seat of the uterus, it should be taken by leeches, or by cupping, as near the parts as it can well be drawn. The top of the sacrum, just over the pubes, the groins, or the labia pudendi, are the best places.[1] The bowels must be gently but regu-

[1] For the last two years, we have directed the leeches to be applied to the inside of the thigh, about its centre; so also, for the cupping. It is very much less

larly purged by neutral salts, and the woman should be confined to a very strict diet; she must also avoid all kinds of exertion during this commenced state of excitement.

The patient should be attentive at the same time to cleanliness, as before directed; especially, as will most probably be the case, if these symptoms be attended by leucorrhœa. If these measures be rigorously adopted, and steadily persevered in, there is much reason to believe, that this congestive condition of the uterus will be much relieved; and, of course, the evils arising from it diminished, if not altogether subdued.

A variety of other affections show themselves at the period we are now considering; such as eruptions, erysipelatous inflammations, rheumatic pains, swelling of the lower limbs, violent headache, and a great variety of nervous or hysterical symptoms. None of these require any peculiarity of treatment, except that the loss of the menses, and the tendency to plethora, must always be kept in view.

It must, however, be remarked, that though hysterical symptoms are wont to disappear about this time, and to be sometimes even violent, owing to an augmented sensibility of the nervous system, yet this complaint almost always disappears so soon as the system becomes accustomed to the change in the nature of the circulation, and its more general determinations over the other parts of the system.

It is highly important, that the cutaneous circulation and sensibility be properly preserved: for this reason, the woman should avoid all causes which may tend to impair them; such as cold, damp places; too humid an atmosphere; too thin, or wet, or damp clothing, or partial draughts of air. To maintain an equality of excitement in the circulation, she should wear flannel next her skin, and carefully protect her feet and legs by shoes of a proper thickness, and stockings of a proper quality. Should she be habitually subject to cold feet, she should employ the mustard bath at least twice a week, so long as this symptom continues.[1]

inconvenient, and is certainly, to say the least, as efficacious. I think we have paid too little attention, in this country, to the practice of the French physicians upon such occasions: they almost always apply leeches at a distance from the affected part, upon a well-founded belief, I am inclined to think, that a revulsive effect is thus produced.

[1] The mustard bath is made by putting two or three table-spoonfuls of the flour of mustard, to a gallon of warm water. The feet are to be put in this just before getting into bed for the night, and rubbed until they glow.

CHAPTER VII.

OF MENORRHAGIA.

By this term we would understand an immoderate discharge of fluid *blood*, properly so called, or coagula, or both, from the internal cavity of the uterus; recurring at the menstrual period, and following the secretion termed the menses.

I have already said that this discharge consists of *blood*, properly so called, in contradistinction to the fluid yielded by the internal uterine surface every lunar month, called the menses. When treating of the catamenia generally, the difference between the menstruous fluid and the circulating blood, was insisted on; and it is important that this distinction be preserved, that two different conditions of the uterus may not be confounded.[1]

It will probably ever remain a matter of doubt, whether the blood which is expended in menorrhagia be from the same vessels as furnish the menstrual fluid, or from a distinct set, which may terminate upon the internal uterine surface; nor is it, perhaps, at this moment, of very great consequence to determine, since it would not lead, with our present knowledge, to any practical good. Reasoning, perhaps, would be against this identity; and would tempt us to believe, that the blood of hemorrhagy does not proceed from the same vessels which furnish the menstrual fluid; for menorrhagia is always, so far as we have witnessed, preceded by the regular menstrual discharge;[2] which it would be but rational to suppose, would effectually relieve any engorgement that might be supposed present at this time; provided this accumulation were confined to the vessels concerned in the production of the menstrual fluid.

[1] Gardien evidently confounds these two conditions, both by the caption of his chapter on this subject, (de la menorrhagia ou flux *immodéré des regles*,) and by his text.

[2] Under the head of menorrhagia, we do not include those hemorrhagies which arise from a lesion of the internal surface of the uterus, or a portion of its proper substance, as in open cancer, or other ulcerations of this organ. We confine ourselves to that discharge of blood which follows or accompanies the menstrual action. We pretend not to account for this condition of the uterus; we only know the fact that it takes place, and that the woman may be liable to it so long as the menstrual periods continue, be these longer or shorter. Women are, therefore, obnoxious to this state of hemorrhagy during a great part of their lives, that is, during the whole menstrual period; for we have no evidence that this takes place after the congestion of the uterus, (so necessary for the menstrual secretion,) ceases to take place; though hemorrhagies from lesion, and some other causes, do very often happen after this time.

Besides, did this flow of blood proceed from the same vessels as the menstruous fluid, we should be at a loss to understand how a hemorrhage should take place from vessels, after distention was diminished by the evacuation of a portion of their contents; which must be the case, did the vessels which ordinarily furnish the menstrual blood, also yield that of menorrhagia. But, if we suppose that a distinct set of vessels is concerned, we can more readily understand how they might be forced, or induced, from any given local cause, to open themselves, so as to pour out blood; since their distended condition may not be relieved by the catamenial discharge; for it is not difficult to conceive, that the whole uterus may be in a congestive state at this time.

Gardien (Traité complete d'Accouchemens, vol. i. p. 289,) declares, that "so great a relation exists between menorrhagia and the menstrual flux, that it would be difficult to determine where the one ends and the other begins." Again: "In fact, all spontaneous hemorrhages have the strongest analogy with the menstrual flux. The phenomena which accompany the issue of blood are absolutely the same in both cases; only, in menorrhagia, the flow partly belongs to an original law, while that of hemorrhages is accidental," p. 289.

It is evident from these passages, that he looked upon both discharges to be the common blood of the system; yet it is notorious they differ widely in many particulars. The one is the result of a secretory process; the other is blood which has escaped from confinement, by the rupture or the opening of the vessels which contained it. Now, were it true that the menstrual fluid and the blood thrown off in menorrhagia were the same, there would be no difference between the menstrual flux and menorrhagia, except in the quantity of blood which might be expended: and, consequently, that menorrhagia is nothing but an excessive secretion of the menstrual fluid; or that the menstrual fluid is nothing but proper blood.

Mr. Hunter declares, "it (the menstrual fluid,) is neither similar to blood taken from a vein of the same person, nor to that which is extravasated by accident in any other part of the body; but is a species of blood changed, separated, or thrown off from the common mass, by an action of the vessels of the uterus similar to that of secretion, (see p. 55,) by which action the blood loses the principle of coagulation, and, I suppose, life." Dr. Good[1] observes upon this subject, that, "as this distinction has not been sufficiently attended to, either by nosologists or physiologists, many of the diseases occurring in the present arrange-

[1] Study of Medicine, vol. iv. p. 30. Amer. Ed.

ment, (his own, under Paramenia,[1]) have been placed by other writers under a genus named Menorrhagia, (a morbid flow of *blood alone*,) from the menstrual vessels. And we have here not only a wrong doctrine, but the formation of an improper genus; for menorrhagia is, correctly speaking, only a species of the genus Hemorrhagia."

We have just intimated, that, as we are at present ignorant of the agency of remedies upon the different portions of the uterine system, a knowledge whether the blood expended in menorrhagia be from the vessels which prepare the menstrual fluid, or from a distinct set of vessels, would be of little consequence in a practical point of view; yet the time may arrive, and that soon, when such knowledge might be highly useful. For, at the present moment, we are acquainted with the influence which the ovaria exert over the internal surface of the uterus in the production of the menstrual fluid; and, consequently, that it may be essential, in the various deviations in the formation of this fluid, that the restorative remedies be addressed to these bodies; whereas, if a different set of vessels from the menstrual yield the blood, the cure might require remedies that would exert an influence upon the extreme vessels of the uterine surface.

At first sight, it may appear idle to anticipate the possession of remedies that would exert an exclusive control upon each portion of the uterine system. Yet even the present history of the Materia Medica will justify the expectation. The ergot, for instance, manifests its action upon the fibres of the body and fundus of the uterus, and not upon the neck; the sugar of lead acts upon the extremities of bleeding vessels; the spirits of turpentine upon the mucous surfaces: mercury upon the salivary glands, &c. &c. Is it, then, unreasonable to hope we may soon be in possession of substances, whose action shall be confined to the ovaria or to the internal surface of the uterus? for until we do find such *specifics*,[2] our practice, in the inordinate flow of the menses, and in menorrhagia, will be rather uncertain.

[1] "Morbid evacuation, or deficiency of the catamenial flux." Amer. Ed.

[2] Every substance which can exert an influence upon the animal system, causes its own peculiar mode of action; and from what we already know, there is every reason to believe, that each organ belonging to the human fabric has appropriate stimuli in a state of health, or counter-agents in a state of disease, among the varied productions of nature; and that these stimuli or counter-agents, are capable of changing the mode of action of such parts, on which they are destined to act. If this be true, how important is it that the peculiar action of every substance should be closely watched when administered to the living animal? It is only by such attention to the influence of medicines, that remedies can be discovered, and properly classed; and it is by the same kind of scrutiny that an individual article of that class shall, at one time, or occasion, merit a preference over every other individual of the same class. To prove this, we need but refer to every day's experience, in the choice of cathartics, emetics, astringents, &c., when prescribing for the body in a state of disease.

It may be asked, of what practical value would the knowledge be, whether the fluid expended in menorrhagia be an increased secretion of the menstrual fluid or truly a hemorrhage? We would answer, that the truth is always of consequence, either directly or indirectly; and that, if they be the same fluids, the disease in question would consist of a morbid condition of a natural action; and if they be not, as we believe they are not, the menorrhagic discharge would consist of a morbid condition of some other portion of the uterine surface, than that which furnishes the menstrual blood, the knowledge of which may lead to great practical results. Be this as it may, the disease is of such frequency and consequence, as to render a complete knowledge of its mode of treatment highly important. We shall, therefore, proceed to give a history of this disease, together with the mode of treatment.

When treating of the "immoderate flow of the menses," we observed, that excess of discharge must be considered as a relative term; and that we should rather consider the consequences of the quantity, than the quantity itself. But, with respect to menorrhagia, it will be found the best practice to attempt to arrest it in limine: we have, therefore, for many years, treated this disease as one that would most probably increase if neglected, though the hemorrhage may be small at the time.

Gardien,[1] however, says, that "we should judge less by the quantity expended, that menstruation is immoderate, than by the loss of strength that is the consequence of it." This advice, we have agreed would be correct, if the discharge were that of the menstrual blood; but we cannot agree it would be proper in menorrhagia. We have just declared that Gardien had confounded these two conditions of the uterus, and this in mere compliance with a preconceived notion; and that notion, in our opinion, founded on no better ground than the weight of authority.[2] Hippocrates compared the purity of the menstrual blood to that of an immolated victim; and declared it would coagulate as quickly, if the woman were in good health. This opinion has been copied into almost all the books of medicine since that time, and handed down and believed by many at this moment. Our own inquiries upon this subject, and they may strictly be called extensive, have constantly led to an opinion contrary to that entertained by Hippocrates; and we are certain that this discharge, when in a state of health, differs widely from the blood of hemorrhage.[3]

[1] Vol. 1, p. 259.

[2] "L'hémorrhagie naturelle qui constitue les règles est artérielle: à cette époque de la vie, presque toutes les hémorrhagies sont artérielles." Vol. 1, p. 223. In this quotation it is perceived that he calls the menstruous action a hemorrhage, and an arterial hemorrhage.

[3] See p. 94.

We have, in our definition of menorrhagia, declared it to be a discharge "of fluid blood, or coagula, or both;" and in these respects, it differs widely from the product of the menstrual action. If a coloured fluid escape from the vagina, which will coagulate when exposed to the air, or if it be expelled in form of coagula, we no longer consider this the healthful process termed menstruation, but the disease called menorrhagia; and, when applied to for this purpose, we prescribe for a state of disease; for it is agreeable to observation, that when this condition obtains, the uterus is not in an entirely healthy state. And we may urge, as a proof of this, that those women who habitually expel coagula to any amount, do not conceive until this state of the uterus is changed.

Women who live indolently, and indulge in stimuli; who use little or no exercise; who keep late hours; who dance inordinately;[1] who are intemperate; who have borne many children; who have been subject to febrile affections; who have much leucorrhœa; who are too prodigal for the joys of wedlock; who are advancing towards the non-menstrual period; who yield too readily to passions or emotions of the mind, are those most obnoxious to menorrhagia.

This complaint is almost always announced by certain unpleasant feelings, which the woman after awhile recognises to be the harbingers of this hemorrhagy; such as lassitude, and especially of the limbs; back-ache; a sense of fulness; and pressure about the region of the uterus; a dragging sensation about the groin; frequent inclination to make water; chilliness; a variety of nervous symptoms; feverishness; quick pulse, and oftentimes tense, full, &c.; all of which disappear, or are much moderated so soon as the discharge takes place. This discharge is almost always the true menstrual secretion in the commencement; but it is either arrested, or is, more properly speaking, confounded with the *blood*, or coagula, which now make their appearance; and which may continue a longer or shorter period; and of which more or less may be expended.

It may take place without any premonition; especially if the operation of a moral cause has produced it; and the quantity thrown out may be so moderate as to induce very little weakness, or any other inconvenience, save that which arises from its duration; or it may be so profuse, as to suddenly prostrate the strength, and become quickly alarming. It may continue but the ordinary menstrual period; or it may persevere for many days beyond it. It rarely ceases suddenly; but gradually declines, both in

[1] Gardien especially condemns the "Waltz." He says "Il n'en est point de plus propre a produire cet effet que cette danse voluptueuse connue sous le nom de Walse." Vol. I. 296.

quantity and in the intensity of its colour, several days before it stops altogether.

When it has continued for many days together, it becomes serous towards the decline; and this change is almost always attended with an unpleasant odour; sometimes extremely offensive, and occasionally even acrid. If it has been habitual for some time, the woman becomes pale, feeble, and emaciated. The breasts lose their fulness, and become flaccid. Leucorrhœa is almost always an attendant; which may be very abundant, and even offensive. The digestive organs become involved, and betray many distressing dyspeptic symptoms. Every thing turns sour upon the stomach; the bowels become constipated, or are urged to diarrhœa; the feet swell; and, if not arrested, dropsy may ensue.

There are evidently two conditions of this affection; one, where the whole system participates; and plethora may exist, or even distinctly formed fever may be excited, just before the hemorrhage takes place. In this case, the face, the eyes, the spirits all partake of this general state of excitement; nor does this condition subside, until the uterine irritation ceases. The other seems to consist of a mere local determination to the uterus, producing an engorgement of this organ, but which does not implicate the general system, except from the waste of strength it occasions, when the discharge is profuse or long-continued.

Most writers on the subject of hemorrhages have divided them into active and passive; but there is great room to question at least the propriety of this mechanical distinction, if there be not sufficient ground to reject it altogether.

Broussais powerfully opposed the doctrine of passive hemorrhages: he contended, that, in all cases, there existed an irritation in the part that yielded the blood; and that weakness, without irritation, could no more produce hemorrhage than inflammation. It is supposed by those who advocate the doctrine of passive hemorrhage, that the expended blood proceeds from the relaxed or partially paralyzed exhalants. But he contends that this cannot be the case, since Bichat, and other modern physiologists, appear to have proved, that after the blood arrives in the capillary system, it is no longer subject to the action of the heart. If this be admitted, where is the power that can force the blood into these orifices?

Dr. Caldwell,[1] in a note on Cullen's division of hemorrhagies into active and passive, observes, that this distinction "is utterly unfounded, and ought to be rejected from pathological science. The phraseology leads to a physiological error. The expression, 'passive hemorrhagy,' as applied to living matter, is a gross

[1] Ed. of Cullen's Practice, p. 734.

misnomer. During life, no hemorrhage can possibly be passive. Blood flows from the vessels that contain it, at least in part, by means of the action of that vessel. Now, is it possible for such action to cease, otherwise than by the cessation of life in the part? But the cessation of life is the commencement of gangrene. A hemorrhagy really passive, therefore, cannot take place, except from gangrenous vessels. But from such vessels, unless they be very large, blood does not flow at all. The reason is obvious. They act on the blood which they contain like dead matter; and we well know, that the action of dead matter on blood forces it to coagulate. Hence, in the vessels of a gangrenous part, the blood does coagulate, and prevents the hemorrhagy that would otherwise ensue."[1]

"Every hemorrhagy, therefore, that does or can take place from the living body, is really an active one. It arises, not from the absolute want of action in the part, but from its wrong action. The vessels *dilate*, or rather contract and *dilate alternately*, when they ought to contract only, and thus prevent the escape of the blood they contain."

For these reasons, and because we have never been able to perceive any practical benefit from the division of hemorrhagies into active and passive, we shall consider the hemorrhagy of which we are treating always to be of the active kind.

We have stated above, that there are two varieties of menorrhagia; and that the first owes its character to the plethoric condition of the blood vessels, and the general participation of the system: hence, the fevered cheek; the brilliant, and sometimes engorged eye; the quick, hard pulse; pain and other uneasiness about the back and uterine region, just before the hemorrhage takes place; as well as the peculiar character of the fluid which is discharged.

The blood discharged in this variety of menorrhagia is sure to betray the general condition of the system; for it is always found rather florid, dense, with but little serum, and much disposed to

[1] It seems to be a law of the system, that the tendency of the blood to coagulate, is in proportion to the diminution of vital energy. This law is one of great consequence and efficacy, in those threatening lesions of the body, called hemorrhagies; for, oftentimes, death would instantly ensue from these causes, did not the blood, by a sudden coagulation, prevent the farther waste of this fluid. This disposition to coagulate is almost certain, when the powers of life are put suddenly upon the wane from the expenditure of blood, by inducing a state of syncope. Now, syncope is a kind of counterfeit death; all the vital energies are suspended for awhile, almost as effectively as if death had really taken place, and the law of coagulation is put in operation, by coagula forming, and thus putting a stop to farther bleeding. These facts are well ascertained. Therefore, when syncope takes place, the blood vessels are almost in a state of death, or at least, of temporary paralysis; they no longer propel by acting upon their contents; consequently, their contents remain quiescent. But, agreeably to the doctrine of passive hemorrhage, the blood should now flow faster, since the vessels are in a state of the greatest possible relaxation.

coagulate. The quantity evacuated will, of course, differ in different individuals; but, whatever may be the quantity, it is sure to present the qualities just named.

This hemorrhagic disposition of the uterus may take place at any moment of the menstruating period; and at any age within that limit. But the vigorous and plethoric, who are liable to the influence of the exciting causes, are more subject to it than the feeble-pulsed, and those who do not encounter such causes. Thus, we find women of cities more obnoxious to menorrhagia than those of the country; because the physical and moral causes, which tend to produce that condition of the system, are applied with more force and certainty to the former than to the latter.

But independently of the causes which may tend to induce a general plethoric disposition of the body, there are some which act by creating a local congestion of the uterus itself. Thus, the frequency of this complaint among the women of Holland, is attributed to the almost constant use of foot stoves, and the inordinate drinking of hot, thin liquids, as tea and coffee; they are also indolent and luxurious.[1] Dancing immoderately, and then permitting the body to cool suddenly; tight-lacing; ill-protected lower extremities; frequent use of demi-baths; excess of venery, &c., may be considered as the most common of such causes.

The most frequent of the exciting causes are all such as may suddenly augment the force of the circulation, and the motion of the heart; or such as shall tend to have a direct action upon the uterus itself. Of the first kind, is an over-stimulating diet; passions or emotions of the mind; violent exercise, or exertion of a sudden kind. Of the second kind, emmenagogue medicines, as the tincture of cantharides, aloes, savin, immoderate venery, especially during the flow, &c.

The indications of cure in the first species, may be readily deduced from the premonitory and accompanying symptoms. They all show the plethoric condition of the system in general, and of the uterus in particular; therefore, the means to be employed to prevent this hemorrhagy, will consist, first, of such as are applied during the absence of the hemorrhagy; and, secondly, those during the period of the discharge. For the first, The predisposing causes should be withdrawn as effectually as possible, by obliging the patient to renounce her indolent habits; by taking regular and well adapted exercise in proper weather in the open air; to live upon a milk and vegetable diet; to abstain from all spirituous and fermented liquors; to indulge in no stimulating articles of diet, as spices, or other condiments; to keep the bowels regular or even a little loose; to sleep, (and that not too

[1] Dr. Rush, MS. Lectures, Leake, Gardien, &c.

long at a time,) in a cool room, upon a hard bed, and without too many bed-clothes, or even curtains; to keep the feet and legs warm; and occasional blood-lettings,[1] &c.

To shun the exciting causes enumerated above, with the most scrupulous care.

During the flow, the first object is to diminish the force of the circulation by blood-letting from the arm, rest, a horizontal posture, cool air, and cold drinks; secondly, to reduce the quantity of the discharge, by such means as favour the contraction of the vessels concerned in the hemorrhage, and favour the coagulation of the blood. Of the remedies which are calculated to fulfil these useful purposes, the sugar of lead seems at present to stand foremost: it should be given in liberal doses, often repeated, if necessary; but always guarded with opium. The following is our usual formula:—

℞. Acetat. plumb. ℈ij.
Gum opii. gr. iv. M. f. pil. xij.

One of these to be given every half hour, hour, two hours, or more seldom, as the necessity may be.[2]

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[1] Blood-letting should always be employed in the intervals, in cases of this kind, whenever the pulse is active; and it must be repeated as long as the pulse is tense, irritable, or full. The best time to abstract blood, we think, is a few days before the discharge, provided the pulse be active at this time: if it be not, let it be watched, and when it is found to be acquiring strength, let the blood be taken then, and in sufficient quantity to reduce both the size and vigour of the artery; for bleeding is useful in such cases, in proportion to the contraction it produces in the vessels. If the pulse rise only near the period for the renewal of the hemorrhagy, blood must then be abstracted, by all means, and in larger quantity than at the other periods just indicated. For if this direction be not attended to, very little advantage will be derived from the operation, as the desired object, (the contraction of the vessels,) will scarcely take place, as those of the uterus are so insulated, and independent of those of the general system.

I have thought I derived much advantage, at these times, from the application of leeches to the small of the back; for eight or ten ounces abstracted by them, seems to have more control over the uterine circulation, than double that quantity taken from the arm.

[2] Dr. Porta recommends "*tannin*" in menorrhagia, in doses of three grains, every three hours; and is led to the following conclusions in regard to its use:—

1. That whenever the uterus is the seat of irritation, which gives rise to an active or hypersthenic flooding, and also when this discharge depends upon a chronic metritis, this medicine acts specifically upon the uterus.

2. But when acute metritis gives rise to menorrhagia, the inflammation must be subdued by copious and sufficient blood-lettings.

3. But when menorrhagia proceeds from any organic alterations in the uterus, this medicine has no efficacy.

4. That a preference should always be given to this medicine in the treatment of menorrhagia, as it is very prompt in its effects: it produces no unpleasant symptoms; and the stomach bears it well even in a state of irritation.—*Archiv. Gen. from the Annali Univ. de Med. April*, 1827.

It may be well to observe, that "tannin" in its pure state, is very difficult to procure, and, consequently, in that condition cannot be well employed, in general practice. It certainly abounds in the Rad. rhatanæ; therefore the extract of this substance is perhaps as good a form as any we can employ. We have already mentioned this substance, when treating of the decline of the menses, page 147.

If this make the stomach sick, or if nausea and vomiting attend, which sometimes happens, it may be administered in the form of enema, as follows: a scruple of the acetate dissolved in two ounces of warm water, to which must be added a tea-spoonful of laudanum. Should this be discharged soon, it may be repeated.

We, however, from late experience, prefer the vinous tincture of the secale cornutum; twenty drops in a little sweetened water every hour until uterine pains are produced. The medicine is then suspended until this irritation passes off: it is then to be repeated until similar effects are produced; but given at longer and longer intervals.

Cold applications, consisting of equal parts of whiskey or brandy, and vinegar, should be applied over the pubes, and renewed as soon as it becomes warm. In warm weather, the addition of ice is very important. The best mode of applying the cold mixture is by cloths wrung out of the mixture; or by means of a large bladder partially filled. If the latter be used, cold water is as good as the mixture just named, as the fluid does not come in contact with the skin; its whole virtue being in its coldness.

Late experience, however, teaches me to consider the tinct. secale cornutum vin., as the remedy most to be relied on. If given in tea-spoonful doses, morning, noon and evening, in some sugar and water until the discharge again makes its appearance, it will be found to have abated the ensuing discharge very much; and if, after this, the discharge should continue, the tincture must be continued. Care must be taken that the drug is fresh as possible; as it is ascertained that this remedy will not preserve its activity more than two years, after being kept dry and in a ground glass stopper bottle.

The plan just detailed is intended only for such cases as are attended by a profuse and threatening discharge; for, in ordinary cases, the sugar of lead, as prescribed above, answers every purpose without the cold application. We deem, however, the other caution important, even in very moderate cases; as very slight errors will sometimes create a great deal of mischief. Rest, cool air, a very low diet, and cold drinks, should be always insisted on, if we expect a permanent cure, even in cases where the patient does not think it important to lie by. Where the discharge is very profuse and alarming, which sometimes happens, even with young girls, but more especially with women pretty well advanced in life, and the means above recommended have not proved successful, the tampon must be had recourse to.

The variety we have just described is generally of much easier management than the second; which consists "in a mere local determination to the uterus, producing an engorgement of this organ; but which does not implicate the general system, except

from the waste of strength it occasions, when the discharge is profuse, or long continued."

The variety now under consideration is most common to women of an irritable and feeble constitution; and where, agreeably to Gardien, there exists an accumulation of vital power towards the uterus.

This variety, like the one just spoken of, is accompanied by some pain and heaviness in the uterine region; heat and sometimes itching in the pudendum. The pulse is small, and rather frequent; the extremities disposed to become cold; the face pale, and sometimes cachectic; the appetite feeble; the tongue frequently found furred, especially in the morning; palpitation of the heart; and respiration hurried upon motion, &c.

The indications in this variety are, to destroy or diminish this congestive tendency of the uterus; and to moderate or interrupt the unnatural discharge.

The first indication is to be fulfilled by equalizing the circulation as much as possible, by determining it towards the surface; by well-regulated exercise; by wearing flannel next the skin; by keeping the lower extremities warm; by a nutritive and easily assimilated diet; abstaining, however, from stimulating condiments and drinks; by preventing constipation, by even purging with aloetic medicines;[1] by diverting the current of blood to some neighbouring part, by dry cupping the small of the back, and blistering the inner side of the thighs; and by the application of leeches to the groin, or inner part of the thighs. This last remedy is found to be particularly useful, when used three or four days before the expected sanguineous eruption; three or four ounces abstracted in this manner is every way sufficient. The mustard bath is a very good remedy in such cases. Emetics, and especially the ipecacuanha emetics, are thought to be useful in this variety of menorrhagia; they were first proposed by Dr. Bryan Robinson for hemorrhagy, and have since been recommended in menorrhagia; but of these we can say nothing decisive from experience. If at all useful, in such cases, it must be just before the menstrual eruption; for, during the flow, we never remember to have seen vomiting abate the discharge when it came on spontaneously, though it may have been pretty severe. Taking a grain of the sugar of lead with a little opium, three or four times a day in the absence of the discharge; or drachm doses of

[1] We have, in several cases of menorrhagia, in women somewhat advanced in life, found great advantage from the hiera picra as a cathartic: it may be used agreeably to the following formula:—

℞. Hiera Picra, - - 3j.
Sapo. Venet. - - gr. viij.
Syr. Rhæi. q. s. m.—f. pil. xx.

One or two of these taken every night, until the bowels are found free. See p. 145.

the tincture of rhatany, or the extract, as directed at page 147, will be found highly useful.

To fulfil the second indication, the means are precisely the same as recommended in the first variety; with this exception, that if the discharge be long continued, we may employ the dry cupping and apply blisters.

In both varieties, we have often found decided advantage from injections per vaginam, made of the solution of the acetate of lead, of sufficient strength—that is, two or more drachms to a pint of lukewarm water. Half of this, or one third, may be thrown up the vagina by means of a syringe, three or four times a day.

In all cases of menorrhagia, opium is found highly useful, when combined with small portions of ipecacuanha; and should always be exhibited, as soon as the pulse will bear its stimulus. It should be certainly given at night, if pain prevents sleep; or even during the day, if necessary.

Gardien makes a third variety of menorrhagia; namely, "a spasmodic." Of this variety I can say nothing; nor do I believe in its existence; the only evidence of the species, agreeably to him, is, that menorrhagia is sometimes relieved by opium, or other antispasmodics.

CHAPTER VIII.

OF THE SIGNS WHICH USUALLY ACCOMPANY PREGNANCY.

In a work treating exclusively of the diseases peculiar to the female, we have thought it important that the inexperienced practitioner should be well acquainted with what are termed the rational signs of pregnancy; and for the following reasons:—

1st. Because pregnancy often influences our prescriptions, in both the acute and chronic diseases that may accompany this condition.

2d. Because the physician's opinion may decide the fate of a female in a court of justice when she wishes to take advantage of the privileges which pregnancy claims, when she may have forfeited her life to the laws of her country by her crimes. Or,

3d. Where the duration of human gestation may involve the character or property of individuals.

Therefore the value of the signs of pregnancy should be as well ascertained as the nature of things will permit, that error may not be committed in our prescriptions; and that the innocent may not be injured, or the guilty absolved; consequently, in a medico-

legal point of view, a knowledge of the symptoms about to be considered, is every way of great importance.

As soon as impregnation takes place, various parts sympathize, either directly or indirectly, with this condition of the ovarium.

These sympathies, or disturbances, are generally so uniform in their nature, and so regular in their appearance, that they have been considered as evidences of pregnancy: the first, and most usual, is the interruption of the menstruous discharge; secondly, nausea, and vomiting; thirdly, enlargement of the breasts; fourthly, the areolæ round the nipples; fifthly, the secretion of milk; sixthly, the enlargement of the abdomen; seventhly, the increased size of the uterus; eighthly, pouting out of the navel; ninthly, spitting of white frothy mucus; tenthly, salivation.

Although almost every pregnancy has nearly the whole, or the greater part of the signs we have just enumerated, yet their union may not, in a given individual case, so positively decide this condition as to render it free from all doubt; especially where the subject may become an object of judicial proceeding; and where life, character, or property, may be involved in the consideration. On this account, chiefly, we will spend a few moments on each of these reputed signs of pregnancy.

Sect. I.—1. *Suppression of the Menses.*

Few signs of pregnancy are more equivocal than the suppression of the menses, and should never be relied on, farther than that sign is entitled to. Dr. Rigby is very emphatic on this subject, in his System of Midwifery; (p. 97,) he says, "The diagnosis of pregnancy is a subject well worthy of the student's most serious attention; for he will of course be liable, when in practice, to be called to give his evidence before a court of justice, under circumstances, when the responsibility will ever be of the most serious and *not unfrequently* of the most fearful nature, the more so, as the old custom of impanelling a jury 'of twelve matrons' to determine whether the woman be quick *with child*, has fallen deservedly into disrepute." "Numerous cases are on record where a false diagnosis in women convicted of capital offences, has led to the most lamentable results, and where dissection of the body after death has shown that she was pregnant. A case is related by Baudelocque of a French countess, imprisoned during the French revolution, who was accused of carrying on a treasonable correspondence with her husband, an emigrant; she was ordered to be examined by two of the best midwives in Paris, and they declared her not pregnant. She was accordingly guillotined, and her body taken to the School of Anatomy, where it was opened by Baudelocque, who found twins in

the fifth month of pregnancy."—Dr. Rigby's Syst. of Midwifery, p. 98. Am. Ed.

The suppression of the menses, in a married woman, or in a woman who has had illicit commerce with a man, may justly give rise to the suspicion that impregnation has taken place; and, as a general sign, may safely be looked upon as one of the most unequivocal that may present itself; yet a variety of causes, independently of pregnancy, may produce the same effect, both in the married and in the unmarried woman: 1st. Exposure to cold and damp at the time the menses are about to appear, or immediately after they have shown themselves. 2d. Certain chronic affections, as phthisis pulmonalis, scirrhous liver, or other visceral obstructions. 3d. The operation of certain powerfully depressing passions, or emotions of the mind; some imperfection in either the ovaries or the uterus itself. 4th. Accidents by falling, or severe blows; and, lastly, the precocious cessation of this function.[1]

If, then, the absence of the menses do not positively evince pregnancy, will their presence prove that it does not exist? This question would, unquestionably, be answered in the affirmative by Dr. Denman, and, perhaps, many others; not because they have not seen coloured discharges from the vagina during pregnancy; but because, from a preconceived notion of the functions of the uterus, they deny these discharges to be menstrual.

In declaring women may menstruate after impregnation, I have no favourite hypothesis to support; nor am I influenced by any affectation or vanity to differ from others; neither do I believe I am more than ordinarily prone to be captivated or misled by the marvellous; for I soberly and honestly believe what I say, and pledge myself for the fidelity of the relation of the cases I adduce in support of my position.

Nothing can be more vague and unsatisfactory than Dr. Denman's definition of menstruation: namely, "from the uterus of every healthy woman, who is not pregnant, or who does not give suck, there is a discharge of blood, at certain periods, from the time of puberty to the approach of old age." Now, from this definition it would necessarily follow, that if a woman menstruate, she must be in good health; but the experience of every day is against this conclusion. Again, if a woman have a discharge of blood while she is suckling, she must, by the terms of this definition, be either *no nurse*, or this discharge is not menstruous blood. Dr. Denman would certainly agree to this last

[1] Dr. Lacock relates a remarkable case of this kind, in which a young lady received a fall down some steps while the menses were flowing, by which they were instantly arrested, and continued to be so during a considerable time. Lacock on Hysteria. See also note, p. 113. I saw, as I mentioned, a similar instance.

deduction, but what proof has he to support this belief? So far as my own, and the experience of many others go, I should say none. I wish to be understood to mean, whenever I use the terms, menstruous discharge, menstruous blood, menses, or any other designation, that legitimate discharge from the uterus, which would, under the best circumstances of health in general, or condition of the uterus in particular, constitute this important function in its most perfect form. I do not mean to include discharges of blood, properly so called, and properly so being, as coming within my views and meaning of the above terms. I employ the terms named above to express the result of a peculiar action of the internal surface of the uterus, but which differs widely from the common circulating fluid called blood; and precisely what Dr. Denman wishes to be understood to mean, when he speaks of "menstruation."

The only argument adduced by Dr. Denman in support of his hypothesis, is, "that, if a woman menstruate while pregnant, she must very often miscarry, as a part of the ovum must necessarily be detached from the uterus at each period." I would ask, why a part of the ovum must necessarily be detached to give issue to this discharge? I see no reason why this should be so; as I am persuaded that this can happen without any such consequence. Dr. Hunter, Dr. Denman himself, Mr. Burns, Baudelocque, &c.,[1] all declare, that for the first two or three months, the inferior portion of the uterus, and more especially the neck, are not always occupied by the decidua, but are left as free, and as unembarrassed, as before impregnation; of this I have no doubt; and it is from this unoccupied portion, that the menstruous discharge takes place.

If it be said, that this surface is insufficient in extent to yield the quantity that is ordinarily discharged, I would answer: First, I am not contending for the quantity, but the quality of the evacuation. And I admit, that, when this evacuation takes place during pregnancy, it is not so abundant as it usually is under other circumstances. Second. That the following fact will show, how capable a small healthy portion of the internal surface of the uterus is, of yielding a quantity of menstruous blood. My friend, Dr. Coxe, gave me a diseased uterus, in the cavity of which there was a healthy portion of surface, not exceeding in size a common thumb-nail; and from this surface was yielded, at every menstruous period, a quantity of fluid; and which, as far as could be detected by its sensible properties, was of a perfectly healthy quality.

[1] "En general, elles, (les règles,) se suspendent durant la grossesse, et l'allaitement; mais il est des cas où leur écoulement continue dans ces circonstances; relativement à la grossesse, il se borne ordinairement aux premiers mois, rarement se soutient il jusqu' à l'accouchement."—*Frank.*

Again, I well know a number of women who habitually menstruate during pregnancy, until a certain period; but when that time arrives, menstruation ceases; several have menstruated until the second or third month; others longer; and two until the seventh month; the last two were mother and daughter. I am certain there was no mistake in the cases to which I now refer. My interrogatories were numerous, and the answers bore all the marks of candour: first, the menses were regular in their returns; not suffering the slightest derangement from the impregnated condition of the uterus; secondly, from two to five days were employed for their completion; thirdly, the evacuation differed in no respect from the discharge in ordinary; except, they thought it less abundant; fourthly, there were no coagula in any one of these discharges; consequently, it could not be the common blood, or the blood of hemorrhagy; fifthly, in the two protracted cases, the quantity discharged regularly diminished after the fourth month, a circumstance not perhaps difficult of explanation. I may also cite, in favour of my position, the authority of Heberden, Hosack, and Francis.[1]

With regard to nurses menstruating, every accoucheur must be familiar with the fact, as it is of frequent occurrence; happening ten times, perhaps, to the other once. Here the same difficulty does not exist; for the uterus is now unoccupied: and the only matter of surprise is that it does not more frequently occur. Though I have strenuously contended for the fact, and attempted an explanation of it, yet I am well persuaded it is but an exception to the rule, and not an ordinary arrangement of nature.

As it is sometimes of consequence to determine an incipient pregnancy, it is proper to notice every thing relative to this important subject. We will, therefore, state Mr. Nauche's observations on this subject. Some years since this gentleman endeavoured to show, that the urine of every pregnant woman contained a substance that he denominated *Kiesteine*, which separates from it, and shows itself in the form of a pellicle on its surface, and considers it as a valuable diagnostic sign of this state. This was several years ago, and but little notice was taken of it, until Mr. Tanchou, of Paris, recently published his observations on it in "*Lancette Française.*" They are as follow:

"He examined the urine of twenty-five pregnant women, and in every case he detected the presence of *Kiesteine.*—The following is the description he gives of the changes which the urine during pregnancy exhibits, and of the characters by which its peculiar ingredients may be recognised.

"The urine of a pregnant woman, collected in the morning, is

[1] Francis's ed. of Denman, p. 231.

usually of a pale yellow colour, and slightly milky in appearance; it is not coagulable by heat, or by any of the tests which indicate the presence of albumen. Left to itself, and exposed to the air after the first day, there begins to appear suspended in it a cottony-looking cloud, and, at the same time, a flocculent whitish matter is deposited at the bottom of the fluid. These phenomena are not of constant occurrence, and, moreover, healthy urine sometimes exhibits analogous phenomena. From the second to the sixth day small opaque bodies rise from the bottom to the top of the fluid; these gradually collect together so as to form a layer which covers the surface: this is *Kiesteine*. It is of a whitish or opaline colour, and may be aptly compared to the layer of greasy matter which covers the surface of fat broth, when it has been allowed to cool. Examined by the microscope, it exhibits the appearance of a gelatinous mass, which has no determined form. Some small cubical crystals can be perceived in it, when it has become stale.

"The *Kiesteine* continues in the state we have now described for three or four days; the urine then becomes muddy, and minute opaque bodies detach themselves from the surface to settle at the bottom of the vessel; the pellicle thus becomes soon destroyed.

"The characteristic feature, therefore, of the urine during pregnancy consists in the presence of *Kiesteine*. It deserves, however, to be noticed, that the urine in some cases of extreme phthisis pulmonalis, and also, of vesical catarrh, will be found to exhibit on its surface a layer of stratum which is not unlike to that now described as peculiar to the state of pregnancy. But with proper attention we may easily avoid this mistake. The stratum, in the cases alluded to, does not appear so quickly on the surface of the urine as the *Kiesteine;* and also, instead of disappearing, as it is found to do in a few days, it (the former) goes on increasing in thickness, and ultimately becomes converted into a mass of mouldiness.

"Of twenty-five cases, in which Mr. Tanchou detected the presence of *Kiesteine* in the urine, seventeen occurred in women who were pregnant from four to nine months, four in women who had quickened, and who considered themselves as labouring under disease of the womb, and the remaining four in patients who had been under treatment for casual complaints—one for sciatica at the Hotel Dieu, another for ascites in the city, a third for an ulcer in the neck at la Pitie, and the last had been cauterized twice a week for a pretended disease of the uterus.—In none of these cases had the existence of pregnancy been suspected, although in every one of them the fact was soon placed beyond a doubt." *Amer. Journ. Med. Sciences*, for Feb., 1840, p. 484.

In one extraordinary case, which fell under my notice in 1791,

the contrary of suppression took place at pregnancy: a woman applied for advice for a long-standing suppression of the menses; indeed, she never had menstruated but twice. She had been married a number of months, and complained of a good deal of derangement of stomach, &c. I prescribed some rhubarb, and steel pills. About six months after this, she again called to say, "that the medicine had brought down her courses, but she was more unwell than before; her sickness and vomiting had increased, besides swelling very much in her belly." I saw that this was pretty much distended, and immediately examined it, as I suspected dropsy—but from the feel of the abdomen, the want of fluctuation, and the solidity of the tumour, I began to think it might be pregnancy, and told the woman my opinion. She now became anxious to understand her situation exactly, and submitted, for this purpose, to an examination per vaginam; this proved her to be six months advanced in pregnancy: after this time, she had the regular returns of her catamenial period until the full time had expired. During the period of suckling, she was free from the discharge: she was a nurse for more than twelve months; she weaned her child, and, shortly after, she was again surprised by an eruption of the menses, which, as on the former occasion, proved to be a sign of pregnancy. Whether this peculiarity pursued her still farther, I cannot say; as she removed from the neighbourhood soon after the birth of her second child.

Whether there was a periodical discharge of a colourless fluid in this case, as a compensation for the regular menses, I am unable to say, as I did not examine the woman on this point, not having, at that time, the same interest as now, in such minute inquiry. I merely state the main facts, though they bid defiance to calculation, and almost to example; Deventer[1] being the only author, so far as I know, who has furnished a similar example.

Sect. II.—2. *Nausea and Vomiting.*

Nausea and vomiting, though a very usual concomitant, is very far from being a certain sign of pregnancy: it occurs sometimes where the menses have been delayed by other causes: it may, however, be considered as adding to the general testimony in proof of this condition. Should the child die while in utero, the vomiting, for the most part, ceases immediately.

[1] Chapter xv. p. 65.

Sect. III.—3. *Enlargement of the Mammæ.*

Enlargement of the mammæ is a very common attendant upon genuine pregnancy, though it is not uniformly so. I have known a number of cases where they did not swell even at the latter periods of gestation; nor was it until after delivery, that they gave evidence of capacity to perform their ordinary functions: on the other hand, I have known them to enlarge considerably, where the menses were interrupted from other causes than pregnancy.[1]

Sect. IV.—4. *Areolæ.*

The areolæ, which are sometimes formed round the nipples, must be considered as equivocal in any but a first pregnancy: in this case did areolæ form, I should place great dependence upon them; for, so far, I have not been deceived. They do not, however, always present themselves; and may not be easily detected, even when formed, in very dark-skinned women: there is always, I believe, an enlargement of the little sebaceous glands which surround the nipples, when areolæ encircle them: and they, as far as my observations go, serve to strengthen the suspicion of pregnancy. So far as I recollect, this blush is not mimicked by obstructed catamenia, or from any other cause than pregnancy. It is possible that they may attend a false conception or mole; but of this I have no experience. In a second or other pregnancies, I do not place the same reliance upon this sign; as a trifling irritation, or other causes, I believe, may produce them; or they may, as I have often noticed, be absent altogether. The marks I have been speaking of, must not be confounded with the permanent stain left around the nipple after a woman has suckled a child; and great care should be taken to conduct this inquiry in such a manner as to give no false impressions. Dr. Ingleby considers the areolæ as a proof of pregnancy.

When the nipples are to be examined, the woman should open her bosom so as to expose the whole breast: she must not be suffered to draw it above the margin of her clothes by placing her hand beneath it.—In doing this, the nipple oftentimes is irritated by the pressure of the fingers, which gives a new character to the appearances. I have, in a number of instances, detected pregnancy by this examination, where the patients insisted their

[1] We have met with this symptom in a number of cases: a swelling and tenderness takes place in simple obstruction, and we have known it accompany the menstrual discharge. In cases of the latter kind it appears to be habitual.

irregularity proceeded from cold or other causes. It must, however, be remembered, that the absence of these areolæ does not prove the woman unimpregnated.

In one case I detected pregnancy when it was not suspected: a lady who had been several years married without becoming pregnant, sent for me to examine her mamma, which she said, had a tumour in it. As soon as I saw the breast my attention was challenged to a more particular examination. The areolæ were so extensive and deep toned, and the little glands were so enlarged, and prominent, that it immediately struck me, that besides the small tumour, (which was nothing more than but one of the glands of her breast, swelled or enlarged,) she was pregnant; I mentioned my suspicion—she laughed at me, as did the husband;—but time proved I was right, much to their joy.

Sect. V.—5. *Formation of Milk.*

The formation of milk in the mammæ is coeval, in some pregnant women, with their swelling; while in others it is not formed until after delivery. When this secretion takes place, it is looked upon by the vulgar as a certain sign of pregnancy; but I have oftentimes known this fluid, (or at least a fluid bearing all the marks of the first formed milk,) plentifully secreted without pregnancy, merely by the interruption of the menses. It has been produced in women past the period of child-bearing, and even, it is said, in men[1] by the repeated application of a child to the nipple. It has also been produced in a girl of eight years old, as we are informed by Baudelocque. (See his very interesting case, Vol. I. page 219.)

I once knew a considerable quantity of milk form in the breasts of a lady, who, though she had been married a number of years, had never been pregnant; but who at this time had been two years separated from her husband. She mentioned the fact of her having milk to a female friend, who, from an impression that it augured pregnancy, told it to another friend, as a great secret; who in her turn mentioned it to another friend, and thus, after having enlisted fifteen or twenty to help them keep the secret, it got to the ears of the lady's brother. His surprise was only

[1] The following case is in proof of this assertion: it is communicated by Mr. Heber Chase, of New Hampshire.

A Mr. James Hildreth, of Hopkinton, New Hampshire, was, about three years since, (Dec. 9th, 1834,) from the abundant secretion of milk in his right breast, enabled, by pressing it with his fingers, to project milk from the nipple two or three feet. Mr. Chase declares he has seen him do so often at the young people around him. He was a blacksmith by trade, and a muscular, robust man, somewhat dissipated, but not so much so as to interfere with his business. He was about thirty years of age, and the father of several children.

equalled by his rage; and, in a paroxysm, he accused his sister, in the most violent and indelicate terms, of incontinency, and menaced her with the most direful vengeance.

The lady, conscious of her innocence, desired that I should be sent for, forthwith; and insisted her brother should not leave the room until I arrived: some time elapsed before this could be accomplished, as we were several miles from each other, during the yellow fever of 1798. During the whole of this time she bore his threats and revilings with the utmost exemplary patience and silence. I at length arrived; and, in the presence of the brother and a female friend, she informed me of what I have just stated; and said her object in sending for me was, to submit to such an examination as I might judge proper, to determine whether she were pregnant or not. She would not permit her brother to leave the chamber; and I conducted the examination without his withdrawing. This thing turned out as I had anticipated, from the history given at the moment, of her previous health. I pronounced her not pregnant; and she died in about eight months after, of phthisis pulmonalis, in which disease the destruction of the catamenia is not an unfrequent occurrence.

Sect. VI.—6. *Enlargement of the Abdomen.*

The enlargement of the abdomen, perhaps, is one of the most equivocal of the enumerated signs, since it may take place from so many other causes as, 1st. Dropsical affections of either the abdomen, uterus, or ovaria.[1] 2d. A chronic disease of the ovaria, or uterus itself. 3d. A retention of the menses, from some accidental cause preventing their flow.[2] 4th. Enlargement of almost any of the abdominal viscera. 5th. The simple obstruction of the catamenia. For these reasons, but little reliance can be placed upon this circumstance alone, or even when combined with several others. For I have had the pleasure, in several instances, of doing away any injurious and cruel suspicion, to which this enlargement had given rise. Within a short time, I

[1] Dr. Blundell relates the following interesting case, which should be kept in recollection, as a beacon to shun a similar error.

Dr. Haighton was sent for in consultation with a distinguished London surgeon, to a case supposed to be ascites, for which the patient was to be tapped the next day. Dr. Haighton suggested that this swelling might be a dropsy of the uterus, but no particular examination was made to ascertain this. During the night, the sac containing this fluid gave way, a "flood of fluid was discharged, and the abdomen collapsed rapidly; a fœtus not larger than the first joint of the finger escaped, the woman escaped the paracentesis, and did well."—Princip. and Prac. of Obstet. p. 78.

[2] See Miss F's. case, in Essays on various Subjects connected with Midwifery, page 337, by the author.

relieved an anxious and tender mother from an almost heart-breaking apprehension for the condition of an only, and beautiful daughter, on whom suspicion had fallen, though not quite fifteen years of age. This case, it must be confessed, combined several circumstances which rendered it one of great doubt; and without having had recourse to the most careful and minute examination, might readily have embarrassed a young practitioner.

This young lady's case was submitted to a medical gentleman, who, from its history and the feel of the abdomen, pronounced it to be a case of pregnancy; and advised the sorrow-stricken mother to send her daughter immediately to the country, as the best mode of concealing her shame. Not willing to yield to the opinion of her physician, (a young man,) and moved by the positive denials of her agonized child, the mother consulted me. The history of the case was thus briefly given by the mother: "Her daughter commenced, between twelve and thirteen, to menstruate, and continued to do so, regularly, until late last fall;[1] at which time she had a very smart attack of the prevailing epidemic; of this she was, however, relieved by the usual remedies; but since which time she had never menstruated; she gradually swelled in the belly; her stomach was much affected, especially in the morning; and the breasts were a little enlarged."

I examined the mammæ, and found them a little tumid, but without areolæ; the abdomen was much enlarged, tense, and hard, in consequence of a large tumour which was confined to the left side of this cavity, and which could be easily traced throughout its right and inferior margin, and proved, (at least in my opinion,) to be an enlarged spleen; no tumour was found in the pubic region; consequently, the uterus was not found enlarged; the navel was sunk; and upon an attempt to pass the finger into the vagina, I found so much evidence of her continency, that I did not persevere, being perfectly satisfied, from the condition of the parts, that she was a virgin. I unhesitatingly, and with no common degree of pleasure, declared the poor child to be free from the charge so heedlessly and cruelly preferred against her.

Sect. VII.—7. *Increased Size of the Uterus.*

An increased size of the uterus, especially in young women, either married or single, will necessarily create a suspicion that it may arise from pregnancy; particularly if its surface, as distinguished through the abdominal parietes be uniformly round, smooth, and elastic; and if there be combined with these marks,

[1] 1832.

several of the rational signs of pregnancy—but it is far from being infallible. This distention of the uterus may arise, 1st, from a dropsical state of the uterus; 2dly, from diseases within its cavity, as tumours, or excrescences; 3dly, from moles, or false conceptions, or hydatids; 4thly, from a retention of the menstruous discharge from the occlusion of the os tincæ, &c. The case referred to, of Miss F., is strictly in point; and was one, among others, where injurious surmises were, for a long time, most cruelly entertained.[1]

Sect. VIII.—8. *Pouting out of the Navel.*

Pouting out of the navel, if it takes place, only proves that there is something behind, which makes it protrude; but it by no means follows, that it is the uterus distended by pregnancy: I believe it invariably takes place in pregnancy after the sixth month, or sometimes even earlier; and I think the following conclusions may pretty safely be drawn from this condition of the navel: 1st, If the woman be pregnant, it will, by its projection, indicate the advancement to be at least six months; yet the woman may be advanced to the fifth or a little beyond it, without this part undergoing a change; 2dly, If this part protrude, it will by no means follow, without the concurrence of other signs, that the woman is pregnant; for this may happen from any cause, independently of pregnancy, that is capable of distending the uterus to a size equal to the sixth or seventh month; as in ascites, when the abdomen is much stretched; from sanguineous sarcoma; from hydatids; chronic enlargements of the liver, and, perhaps, of some other of the abdominal viscera. When this part does not protrude, we are not to conclude that the woman is not pregnant; as it requires the presence of the uterus behind it, to make it appear; and, therefore, whatever is capable of preventing its presence immediately behind the navel, as insufficient development, or its sinking unusually low in the pelvis from the extraordinary size of this cavity, is capable of interrupting this protrusion.

Sect. IX.—9. *Spitting of Frothy Saliva.*

Spitting of very white frothy mucus is by no means a constant

[1] Since this period, I have met with a case very similar to that of Miss F.'s in a married lady, but who had never been pregnant. This case, naturally enough, was looked upon as one of pregnancy, as there was no apparent incapacity—all the rational signs of this condition were present; and it was supposed that the patient was in her seventh month of gestation. On the fifth of May, 1830, she was suddenly surprised by a large flow of a fluid resembling blood, but in which there was neither coagula, fœtus, nor placenta. The abdominal intumescence quickly subsided, and the patient was very soon relieved of all the symptoms which re sembled pregnancy.

attendant upon pregnancy; but when it does occur, it very certainly points out this condition. This saliva is very tenacious, and very difficult to deliver from the mouth; it is extremely white, and a little frothy; and, when discharged upon the floor, assumes a round shape, and about the size of a shilling piece: hence the expression, that the person is "spitting English shillings, or cotton;" and, so far as I have remarked, it is almost a certain sign of pregnancy.

Sect. X.—10. *Salivation.*

Salivation, like the sign just mentioned, is not a constant attendant upon pregnancy, except in a very moderate degree; indeed it is not very rare, though it seldom exists in excess: but, when it does happen, it very decidedly points out this condition. —I do not remember to have observed this symptom from any other state of the uterus.[1]

From what has been said, it appears that the rational signs, (as they have been termed,) of pregnancy, may exist in stronger or weaker combination, without proving it unequivocally; though they may leave little or no room for reasonable doubt of its existence. There is, then, but one mark, by which pregnancy can be absolutely determined—and that is, the movements of the fœtus itself within the uterus. In judging of this we are not to rely upon the ipse dixit of the woman, as she may be deceived, or have motives to mislead; upon this point, therefore, we must determine for ourselves.

Upon this point Dr. Blundell furnishes us with the following curious facts: "I know an instance of a lady possessing more than average intelligence, the mother of twelve children, who was led by certain abdominal movements into an erroneous persuasion that she was again pregnant; for spasms of the abdominal muscles, and flutters of the bowels, may now and then be mistaken for the movements of a child. It ought, moreover, to be known, that some women possess the power of similating the fœtal movements, by the action of the abdominal muscles, so exactly, that even an experienced accoucheur might be deceived. A female who possessed considerable skill of this kind, formerly exhibited her talents in this town (London,) for hire; she was visited by

[1] Since writing the above, I have met with two instances of salivation in females, which was not produced by pregnancy, or any other known cause. One was extremely profuse, and lasted full three weeks, in defiance of all applications. The fluid was nearly tasteless, and was without the slightest odour: it ceased gradually, and I may say spontaneously; for no remedy that was used appeared to make the slightest impression upon the discharge. This affection seemed to arise from some condition of the stomach, as much nausea attended. The other was less profuse, and more obedient to remedies—a strong infusion of cinnamon appeared to afford complete relief, though it was altogether unavailing in the other instance.

Lowder, Mackenzie, and some other celebrated accoucheurs of the day, and after satisfying themselves that the uterus was not enlarged, they made the usual examination of the abdomen, when they all agreed that the movement was so exactly analogous to that of the fœtus, that no distinction could be clearly made, adding, if there had been no internal examination made, they should, judging from this only, have satisfied themselves that the woman was with child."

To do this it is necessary to place the hand upon the bare abdomen, and wait for the motion of the child; or we may endeavour to provoke it, by having the hand either hot or cold, according to the season, as recommended by Morgagni; and as has been often practised successfully by myself. Should the weather be hot, we should have the temperature of the hand reduced by cold water, or ice; or, if the weather be cold, have the temperature raised, by placing the hand in warm water for a short time. By these means we rarely fail to excite the fœtus to action; and we may succeed in having it even pretty frequently repeated, by repeating the same means. Of this fact I am perfectly certain: but, to account for it, is beyond my ingenuity. By touching per vaginam, we may ascertain, that the uterus contains a solid body within it: but we cannot, by this method, determine whether it be a living being, or an imperfectly organized mass.

Will the absence of all motion within the uterus determine the woman not to be pregnant, when a sufficient number of the rational signs combine to render it more than probable that she is? I must answer this question in the negative; as instances have occurred to others,[1] and one to myself, where the motions of the child were never perceived, during the whole period of utero-gestation. In such cases, an examination, per vaginam, will aid much; especially at the latter period of pregnancy—the state of development of the uterus; the feel of the substance contained in it; the condition of the os tincæ; the height of the fundus, &c., will, when taken into consideration, and found perfectly to correspond with the woman's history of herself, prevent any serious error in our estimate.

Sect. XI.—11. *Of Quickening.*

By quickening we are to understand the first perception the woman has of the child's muscular action. It is presumable, that it has in a very feeble manner exerted itself very often before it is or can be noticed by the mother; and the moment at which this action becomes obvious to her, must be at different periods of pregnancy, in different women, owing to the greater or less

[1] Levret, as quoted by Baudelocque, Vol. I. p. 240.

strength of the fœtus; the quantity of the liquor amnii; and the sensibility of the uterus itself. I once knew a lady of great nervous sensibility, who constantly perceived the motions of her children at twelve weeks; others are longer, and may be said to be at every period between the twelfth week and seventh month —the medium period is the most common; and when I declare the most usual to be at the fourth month, I am, perhaps, as near the truth as can well be ascertained.[1]

An anonymous writer in the Medical and Physical Journal for June, 1812, under the name of "Medicus," has puzzled himself, besides appearing willing to puzzle every body else, by a learned attempt to explain the cause of quickening by physical and metaphysical reasoning upon the subject. He evidently confounds two circumstances totally distinct, (if one of them really has an existence,) in their natures, under one general term; namely, the first perceptible motion of the fœtus is confounded with a supposed sudden change in the uterus, at the period the fundus usually appears above the superior strait. The disposition to syncope, which is sometimes felt by women at about the fourth month, he calls quickening; and declares it to be owing to the sudden escape of the uterus from restraint to liberty, by mounting above the brim of the pelvis, and there enjoying greater freedom and repose. He will not admit that any motion of the child constitutes quickening; but that it essentially depends upon the change of position of the uterus itself. He rejects the common and "ancient" explanation of quickening, for the following reasons:—

1st, "The sensation of quickening, (by which he does not wish to be understood to mean any muscular action of the fœtus,) is not constant and universal; some women never experience it, others with some of their children only.

2d. It has a distinct character from any subsequent motion of the child; no woman ever admits that it resembles, in the slightest degree, the struggles of the fœtus.

3d. This sensation is never repeated in the same pregnancy, which must happen if it arose from the motion of the child.

4th. It is totally incomprehensible that any motion of which the fœtus is capable, in the fourth month, should communicate such a sensation to the mother, as to produce deliquium animi."[2]

The whole of these arguments go to declare, that when the uterus suddenly overcomes any restraint to its passage out of the

[1] See Chapter on the Term of Utero-gestation, in System of Midwifery, by the author.

[2] We were much surprised to find this notion of "quickening," adopted by Mr. Morley, a late writer, "upon the symptoms of pregnancy, &c." We think it probable, that this gentleman will be induced to call things by their right names, when he has more experience to aid him.

brim of the pelvis, the woman is wont to feel faint; and he confounds this feeling, if it exist, with the sensation which all women, (as a general rule,) experience, after the fœtus has acquired sufficient strength to make itself felt; and which increases in force, and is multiplied in frequency, as gestation advances; or, in other words, he calls the sensation created by the uterus suddenly rising above the superior strait, quickening; but declares it to be distinct from the motions of the fœtus. In this I most fully agree; as I do not believe that the uterus is ever so suddenly elevated into the abdomen, as to produce the sensation of faintness. I am, by no means, convinced of this sudden elevation of the uterus, by the inquiries I have made of women, (who, one would suppose, were the best judges upon this subject.) My inquiries, however, have resulted in the establishment of the following facts:—1st. That all women experience, some sooner, others later, the sensation which they term quickening; 2d. In some, this feeling is accompanied by a disposition to faintness, or rather of sinking, as they express it; and this is experienced, in some few instances, whenever the motion of the child is repeated, until after the fifth month; 3d. That those who "quicken" very early, are most obnoxious to this enfeebling sensation; 4th. That, when the feeling of faintness comes on, they are *certain* it is always produced by the *motion of the child itself;* 5th. That none have ever been sensible of any disposition to deliquium, but from the stirrings of the fœtus.

These facts are conclusive, that the sensation in question is the result of the muscular agitations of the child; and that the explanation of "Medicus," is at variance with this opinion; consequently, not calculated to explain the phenomenon. Besides, the circumstance mentioned by "Medicus," of the sudden eruption of the uterus from the pelvic cavity, has no existence; and even if it were true, I do not see why this change of position is to be confounded with the absolute stirrings of the fœtus. If he can make out his position, that the uterus suddenly surmounts certain difficulties in its attempt to rise higher in the pelvis, and that this is accompanied by deliquium animi, it is well; but for the sake of precision, and of logic, do not let him confound it with quickening.

Besides, there is a want of ingenuousness in the statement of facts by "Medicus;" for we are yet to discover, that any one has explained the term "quickening," by saying it was owing "to life being suddenly imparted to the embryo." This would in itself be absurd, and contrary to all belief upon the subject; for I do not hazard much when I say that there is no one at present, nor perhaps ever has been, who supposed that the embryo did not possess life from the instant it obeyed the stimulus of the male semen for development; and for this plain and sim-

ple reason, that if it were not alive, it must be dead; and if dead, it must be cast off by the womb, as an extraneous substance. There must be a period when the embryo is not sufficiently developed to move; another when this can be but feebly and imperfectly performed; and another, when it can move with sufficient force to give evidence of this increase of power; and this moment is instantly recognised by the mother, who then says, she has "quickened;" and that this novel sensation should be accompanied by novel effects, and even sometimes by syncope, is no way surprising. The older writers merely wished to be understood, by the term quickening, that moment at which the embryo gave the first physical proof of life; and not the moment it received it.

That an abatement of the severity of the symptoms of pregnancy takes place about the period of "quickening" I am well convinced; and that this takes place with greater certainty, when the uterus can repose itself upon the anterior portion of the pelvis; yet I am unwilling to admit, that this change is owing to the sudden rise of the uterus above the brim of the pelvis, as is declared by "Medicus:" 1st. Because, I do not know that this has ever taken place as a natural arrangement; and 2d. Because if it did, it might create the unpleasant sensations agreed upon by "Medicus."

To me the amelioration of symptoms at this period appears to depend upon two circumstances mainly; 1st. Upon the uterus being enabled to repose upon the symphysis pubis and its neighbourhood; therefore, no longer liable to be depressed in the cavity of the pelvis, by the often repeated impulses of the abdominal viscera. 2d. To the sensibility and irritability of the uterus being diminished by the frequent repetitions of the child's motions; in this obeying the law, which seems to govern every other portion of the system as regards the operation of stimuli, by becoming less and less sensible to them, in proportion to the frequency of their application; hence, parts pretty uniformly sympathizing with the uterus when impregnated, will cease to do so, or will do so in a more moderate degree, as that viscus shall be itself less affected.

From what has been said, it will be evident, that much difficulty exists in determining that condition of the female called "pregnancy." We have endeavoured to show that the "rational signs" of this state are particularly liable to error; and, therefore, that where it becomes highly important to determine this point they are not to be absolutely relied upon, however strongly they may be marked, or however numerously they may be combined. In the more early advancement of this process, even to the fourth month, the difficulty of arriving at entire certainty is acknowledged by all who have any experience upon this subject;

and, that the one so much relied upon by Baudelocque and many other experienced accoucheurs, namely, the motion of the child, has lately been looked upon as doubtful by Mr. Morley. He says, it is possible for wind or other intestinal motion to be mistaken for the motions of the child.[1] Now, this we declare to be impossible to the experienced accoucheur, who has been attentive to this part of the practice; though we acknowledge it to be every way probable, to the inattentive and inexperienced practitioner. Mr. Morley appears to have fallen into this mistake from the opinion he has so inconsiderately adopted, of the cause, or rather the nature, of "quickening;" namely, the ascent of the uterus through the upper strait of the pelvis, instead of the motion of the child, by the exercise of its muscular powers within the uterus, as has already been noticed above. The accoucheur who has ever experienced the stirrings of a fœtus in utero, cannot mistake the movement of flatus for the motion of the child; therefore, after the fifth month, we think there can be little difficulty in distinguishing the pregnant condition of the womb; but up to that time, it is constantly involved in much doubt.

But fortunately at the present time, the uncertainty just spoken of appears to be removed, by the discovery of the heart's motion, and the noise of the placental arteries, by means of the stethoscope, by Kergaradic; and since verified by a number of practitioners, especially by J. C. Furguson, A. M., M. B.,[2] and Dr. Kennedy.[3] Both these gentlemen find that the double beat of the child's heart can be distinctly heard through the uterine and abdominal parietes, and this as early as between the second and third months; and proportionably stronger as gestation advances. The following rules for the use of the stethoscope appear to be very satisfactorily established:—

First. That the instrument can be advantageously used over the patient's common clothes; but that it is better to have but a single covering over the abdomen, and the patient lying down.[4]

Second. That in the early months, the instrument must be applied immediately above the pubes—and though the iliac arteries may give the "bruit soufflet," as well as the uterine and placen-

[1] Dr. Blundell informs us, that the motions of the child in utero can be by the designing so simulated, as to deceive those who have had a very enlarged experience in midwifery: in proof of this, he informs us that a woman in London deceived both the experienced Lecturers, Lowder and Mackenzie, and they honestly confessed they would have been imposed upon, had they not ascertained, by an examination per vaginam, that the uterus was empty.—Principles and Practice of Obstetricy, p. 156. The case is referred to in page 173.

[2] See Dublin Med. Trans. Vol. I. part 1, New Series.

[3] See Dublin Hospital Reports, Vol. I.

[4] Fodere recommends the application of the ear to the naked abdomen, when it can be done with propriety, as the sounds are then more distinct.

tary arteries, yet they can never resemble the double stroke of the heart; nor can they be well heard, except in the groin; whereas, the other may be heard over some extent of the abdomen; especially in the more advanced stages of pregnancy.

Third. That the beat of the fœtal heart, agreeably to Mr. Furguson, may be heard in almost every region of the abdomen.

Fourth. That the beat of the fœtal heart is not always heard in the same place in the same individual; that is, it may be found at one point to-day, and at another to-morrow, owing, doubtless, to the change in the position of the fœtus itself.

Fifth. That the pulsations of the child's heart are often double that of the mother's; and its double beat is well and distinctly marked.[1]

Sixth. That a fœtal heart, not exceeding in size a hazel-nut, can be distinctly heard to beat by the stethoscope.

The value of this discovery, in a medico-legal point of view, as well as oftentimes in the common routine of practice, need not be commented on.

While on this subject, it may be well to mention, that Dr. Beccaria thinks he has discovered a new symptom, by which pregnancy in the early months is very certainly detected. This author thinks he has observed, in many instances, during several years' practice, a painful pulsating sensation beset the woman, in that portion of the skull which Gall terms the organ of amativeness; this feeling is accompanied by giddiness upon the least motion of the head. Such females as feel this pain are suddenly seized with it, and without premonition. It continues some time, and is followed by sleepiness, which being yielded to for a short time by the patient, she awakens free from pain, and with a great appetite. This pain returns daily, at about the same hour, for about eight days. It leaves the patient spontaneously and without the aid of art. This symptom manifests itself without being accompanied with the usual signs of pregnancy, and without the woman suspecting herself to be in this situation.—(See Amer. Jour. of Med. Sci. for May, 1831.)

[1] Mr. Furguson found, in one instance, the beats of the mother's heart 80, and that of the fœtus 136. In another, mother's 90, fœtus 130. In another, the mother's were 100, and the fœtus but 28.

CHAPTER IX.

OF THE GENERAL CONDITION OF THE SYSTEM, AND THE EFFECTS OF CERTAIN REMEDIES UPON IT DURING PREGNANCY.

Dr. Denman seems rather unwilling to call the various affections to which the female is liable from impregnation, diseases. He says, "The state of pregnancy is an altered, but cannot with propriety be called a morbid state." We are of opinion, that pregnancy is not necessarily a disease, but that the impregnated uterus very frequently induces it in other organs of the body, from a strong sympathetic influence, though it may be free from disease itself.

The uterus being occupied with the rudiments of a new being, agreeably to the arrangement of nature, cannot properly be said to be in a morbid condition: on the contrary, it is essential to the object of this condition, that it preserve almost inviolate its healthful integrity. For if the uterus become diseased, in the strict meaning of the word, the intentions of this condition will, almost to a certainty, be frustrated. It therefore has a decided power over other parts, by exciting them to diseased, or at least deranged action, while it preserves itself in the most healthful state. Indeed, the healthful state of this organ seems necessary to the power it has of calling other parts into sympathy.

This is abundantly proved by the fact that the process of gestation goes on, as a general rule, best, when certain, or what are termed the rational signs of pregnancy, are present, and even in full force: such as nausea, vomiting, salivation, heartburn, swelling of the breasts, &c. &c., and consequently proving pregnancy to be a healthful condition. This is a fact almost universally admitted by the writers upon the subject of midwifery. "It is a popular observation," says Dr. Denman, "confirmed by experience, that those women are less subject to abortion, and ultimately fare better, who have such symptoms as generally attend pregnancy, than those who are exempt from them," p. 225.

Is it not then certain, that the uterus is in the best health, when it excites the various parts concerned in the affections just enumerated? and when it does not move them to sympathy as above stated, that it is performing its functions less healthily: since it may be excited to action, and very often is, in the absence of these symptoms, to abortion? For habitual aborters are

very rarely attacked with the more common affections belonging to pregnancy.[1]

The uterus, when impregnated, produces commotions in various degrees, in other portions of the system, while it preserves itself in the most healthy condition, as if these various sympathies were intended to divert all evil from it, that the great object of nature, (the propagation of the species,) should not be circumvented with too much facility. Very frequently, in civilized life, and not uncommonly in savage life, the "breeding symptoms" are very often called forth; now, it is not reasonable to suppose that all the severe sufferings to which the pregnant woman is subjected, can be idly instituted, without a physical end, or a moral purpose! It cannot be that the severe privations, and the absolute evils of gestation, should have been intended as an affliction without an object!

The sympathies called forth by pregnancy, though they are, strictly speaking, but chains of morbid actions, so far as the parts immediately affected are concerned, yet they are not, like most morbid actions, called forth by a morbid cause; and we must still insist, that pregnancy, abstractly considered, is not a disease. For we have already shown, that the uterus, the part most immediately and extensively concerned in the process of gestation, must preserve its healthy powers, that this function shall not cease. It is, therefore, unlike any other process in the human body; for it seems to provoke disease in other parts, in order to preserve the perfection of its own operations.

The disturbances arising from impregnation have the tendency to prevent plethora, or to divert excitement. And these objects are chiefly effected through the agency of the stomach, the part most generally subjected to this kind of vassalage. Hence, nausea, vomiting, loss of appetite, disgust, or loathings, or longing for certain unnutritious substances, &c. These affections are instituted, that the quantity of circulating fluids may be lessened, and excitement diverted; and thus prevent the evils so sure to attend that condition of the system called plethora. Now, if the subjects be closely examined, it will pretty generally be found, that the sympathetic affections are violent, in proportion to the necessity of subduing this state of fulness, or uterine excitement.

We may be told, that many women "breed" without any, or but very few of the affections which commonly attend pregnancy. This is admitted; but in such cases there is, perhaps, no necessity for instituting this subduing process; as there may be little or no tendency to the fulness spoken of.

[1] It must, however, be admitted, that there are exceptions to this rule; we have seen several instances of extreme sickness of stomach, vomiting, &c., attend, when the patients have aborted, and this repeatedly.

Generally, the women who are exempt from this common penalty, are those who possess great physical powers, and are in the habit of constantly employing them. In these cases, the same end is answered by other means. The excitability of the system is expended by the regular application of the stimulus of exercise; and, consequently, that state of irritability of the muscular and vascular systems, so injurious at this period, is prevented. Besides, people who employ their physical powers in useful exertion have few provocatives, save that of regular exercise and regular rest, to produce appetite; no artificial condition of the stomach is created; they satisfy their cravings by a simple but nutritious diet; and no more blood is formed than is sufficient for the exigencies of the system.

In these cases, also, the irritability of the uterus never becomes so excessive, as where the contrary life is led. For the uterus, being a muscle, participates, like the other muscles of the body, in the general benefit derived from healthful and regular occupation and exercise. The nervous system has less mobility, for the same reason; of course, the uterus will be less disposed to be thrown into contraction, by the application of either physical or mental stimuli; consequently, there will be less disposition to abortion.

With those who lead indolent lives, and who feed luxuriously, the case is very different. In such, more blood will be made than can advantageously be employed; consequently, there will be "plethora"—and not only plethora, but augmented irritability; and, therefore, a liability on the part of the uterus to be thrown into contraction, by smaller causes, sometimes, than ordinary.

Now, should such females not be visited by the common affections of gestation, the liability to abortion will be increased in proportion to the disposition of the system to become plethoric. Hence, the truth of the remark, that "those women are less subject to abortion, and ultimately fare better, who have such symptoms as generally attend pregnancy, than such as are exempt from them."

We know a lady that is easily provoked to abortion, who can tell, soon after the stopping of her catamenia, whether she will carry her child or not, by the state of her stomach. If she have no morning sickness, vomiting, loss of appetite, or disgust, she is certain to abort. She has now acquired sufficient knowledge of herself to prevent this accident; and whenever she faithfully acts up to the dictates of her reason and experience, she is sure to carry her child safely.

If, after the interruption of her menses, she do not become affected with the common consequences of impregnation, she instantly reduces the ordinary quantity and quality of her food; drinks nothing but water; keeps her bowels soluble; and some-

times, but not always, loses a little blood; (but this never without the advice of her physician;) uses very little exercise, lest she produce fatigue; in a word so conducts her regimen as to very much reduce, if not entirely prevent, plethora; and she so manages her physical exertions as not to convert them into unusual stimuli to her nervous and muscular systems.

But, at other times, when she becomes pregnant, and has the ordinary accompanying signs, she takes no extraordinary trouble to regulate the condition of her system, as she finds they are almost always sufficient to subdue the tendency to plethora. But should she feel headach, or other marks of fulness, she loses a little blood, or eats less.

During pregnancy, the system is in a state of constant stimulation from this very cause. First, there is the stimulus of distention constantly operating, from the first six weeks to the full period of utero-gestation. This is the most obvious in the first few months; and, for this reason, the uterus yields with more reluctance at this, than at any subsequent period, either from its own specific density, or from the smallness, as well as feebleness, of the distending cause within.[1] Hence, in the first few months of pregnancy, the sympathetic affections are more violent than at the after periods. 2d. Joined to the stimulus of distention, is that disturbance which is, and must be, consequent upon the change of position of all the abdominal viscera, and which is sometimes very considerable. (See section on the pain in the right side of pregnant women.) 3d. The constant, though not uniform pressure upon the intestines, both above the fundus, and below its posterior and lateral portions, giving rise sometimes to many unpleasant symptoms; such as cramping pains, from the unequal distention of the bowels; constipation; diarrhœa; &c.[2]

[1] So reluctantly does the uterus yield at this period, sometimes, that much inconvenience is experienced on the part of the patient, from severe alternating pains in this part, which are tranquillized with difficulty, by blood-letting, opium, &c. At other times, it absolutely refuses to yield farther than a certain point; contractions are excited, and the ovum eventually expelled—this is one of the causes of abortion.

[2] "There is every reason to believe that the uterus, and, therefore, its cavity, is not enlarged solely by the distending power of the ovum; as, in cases of extra-uterine pregnancies, it has been known to be much larger than in the natural state, and to be lined with the decidua."—Review of Dewees on Females. N. Amer. Med. & Surg. Jour. Vol. III. p. 302.

In reply to the above critic, it is but necessary to observe that I have no where asserted that the increase of the uterus was owing solely to the distending power of the ovum. I have only declared that the uterine *cavity* was enlarged by the ovum; and that it is, in every way, evident, as the most perfect relation between them is constantly established after a certain period of pregnancy. Now, if the ovum do not make room for itself, it must be evident some other power must exist for this purpose. Can any other power be pointed out? Is it not clear, to demonstration, that the ovum is the agent, when, if this be broken, and the liquor amnii discharged, the uterine parietes contract to the altered size of the ovum? No, says the reviewer; for "the uterus is found to be much larger than in the natural

The combination of these causes keeps the system in a state of constant excitement; the pulse is, therefore, almost always accelerated. The nervous system directly, and the arterial indirectly, are always found to bear stimuli ill. Hence, in their exhibition at such periods, there is much caution necessary.

The young practitioner should never lose sight of the important fact just mentioned, if he expect to be successful in the treatment of the diseases of the female at such periods. We have known many errors committed for want of due attention to this state of the female system: some of greater, and others of minor importance; but all errors of this kind should be avoided with great care.

To show the susceptibility of the system to stimuli at this period, in some cases, we will relate one instance of many of a similar kind, which have fallen within our own knowledge. Mrs. ——, pregnant with her sixth child, and at the eighth month complete of utero-gestation, complained suddenly of sickness, accom-

state, in cases of extra-uterine pregnancies." Can the reviewer bring any case of extra-uterine pregnancy, where the *uterine cavity* was found of a size equal to that at which it would have arrived, had the pregnancy been a uterine one? We are sure he cannot.

That the uterus becomes larger in cases of extra-uterine conceptions, we admit without hesitation; for, in such cases, blood is sent to its parietes, and the decidua is formed, as in a natural pregnancy; and hence its enlargement in such cases. But this proves no more than is here set down; namely, that the uterus is larger than in its natural state; and this is all that has ever been asserted by the relators of such cases. Let us now ask, does this prove any thing contrary to what I have declared upon this point? All that has been said upon the distention of the uterus, therefore, remains uncontradicted; for I have never advanced that the increase of this organ from gestation was solely owing to the ovum. On the contrary, I have maintained the influence of the increased quantity of blood, and the consequent augmentation of the vessels in the proper substance of the uterus, as contributing materially to its enlargement; and to these two causes do I still attribute the enlargement of the uterus in a natural or healthy pregnancy.

The reviewer farther declares, "It is not correct to assert that the greater sufferings of the woman, in the earlier periods, depend upon the stimulus of distention being greater at that time; as, in some individuals, these sympathetic affections appear before we have any proofs of the ovum having reached the uterine cavity." —*Ib.* To this logic we would only answer, that, if there be "no proofs of the ovum having reached the uterine cavity," there can certainly be none that it has not; and, consequently, we have as much right to the positive assumption, were it in any way important to our views, as the reviewer has to the negative. But this is of little consequence. We believe we are borne out by all physiologists, when we assert that later than thirty days has never been fixed for the ovum to gain possession of the uterine cavity; and we believe that all observation confirms the declaration, that sooner than this, the rational signs of pregnancy never appear; indeed, six weeks is very early for these symptoms to manifest themselves. Nor is it of any kind of consequence to the subject in question, whether the distention of the uterine cavity be effected by the ovum, or by any other agency, since the reviewer himself admits that the uterus increases, even in extra-uterine conceptions. The ovum, however, must always be regarded as infinitely the most common cause, and was consequently chosen to illustrate the principle contended for. And we may add, that when the signs of pregnancy appear earlier than is here stated, they are the exceptions to this rule.

panied by a distressing sensation of the stomach; she was advised, by a young practitioner of medicine, who happened to be present, to take a little pretty strong brandy and water; which he accordingly prepared, and gave to her.

She had not swallowed the mixture more than fifteen minutes, before she felt the distressing sensation increase, though the nausea was abated; at the same time she experienced a confusion, and severe pain in the head, which seemed more concentrated in the forehead, immediately above the eyes; a dimness, or rather a temporary loss of sight, with strong twitchings in the muscles of the arms and legs.

The physician, as well as the family, became alarmed lest this should eventuate in a "fit;" and we were requested to see the lady immediately. When we visited her, she was labouring under the above named symptoms, and which had been gradually increasing from the beginning of the attack.

We found her with an accelerated pulse; a flushed face, and considerable confusion of intellect. The remedy, in such a case, could not be mistaken. Her arm was immediately tied up, and blood abstracted, until her head and senses were perfectly relieved; it did not, however, require more than fourteen or fifteen ounces of blood to effect this. She had no return of any unpleasant symptom after that evening.

So much does pregnancy modify the affections of the system, that even the sensations called nervous can rarely be relieved by the usual remedies, however successful they may have been with the same patient at other times, but under different circumstances. The common symptoms by which hysteria shows itself, such as palpitation of the heart; a sense of suffocation; difficulty of swallowing, &c., can rarely be controlled by the common remedies, unless they are anticipated by a bleeding of a greater or less extent. This should be borne in mind: for success will not follow the use of remedies, without attention be paid to it.

But the susceptibility of the system to stimuli during pregnancy is more evident when the woman is attacked with an acute disease: such as fever. To relieve her, at this time, is found more difficult always, than at any other; for the system is now so susceptible, so disposed from the circumstances of pregnancy to maintain morbid action, that remedies of the most appropriate kind succeed with difficulty. And if it be attempted to accelerate convalescence by tonics, even of the mildest sort, they are almost sure to disappoint the practitioner, if they should not even recall the disease.

Nothing, perhaps, shows the difficulty of employing tonics during pregnancy, more than the want of success of the Peruvian bark in intermittents. In substance, we scarcely ever succeed in arresting the paroxysms, as we might calculate to do in ordi-

nary cases, unless its exhibition has been succeeded by very ample depletion. We have seen a number of instances, where an intermittent has been quickly converted into a remittent, by the exhibition of the bark. Indeed, it is hardly ever safe to trust it even after very liberal evacuations. The sulphate of quinine, however, is less objectionable, or less treacherous.

In a word, we rarely use tonics of the more powerful kind, in the convalescence of females, after acute diseases, when complicated by pregnancy, especially in the earlier months. After the fifth month, up to the full period, the system is less irritable. For soon after quickening, almost all the sympathetic affections begin to moderate; and sometimes, nay, very often, cease altogether.

This, it is probable, is owing to the following causes;—1st. From the uterus now making greater demands upon the system at large for blood; from the increased size of itself and fœtus; and consequently relieving, in a degree, the state of plethora. 2d. By the system having become more familiar to the peculiar stimulus of pregnancy, from its long continuance. 3d. To less irritation being experienced by the greater disposition of this organ to be distended. For, after the fifth month, the resistance of the fundus and body is less; 1st. From its increase of vascularity: and, secondly, from the ovum augmenting in power. Hence the melioration of symptoms after the fifth month. We will now consider the effects of certain remedies during gestation.

1*st. Of Bleeding during Pregnancy.*

From what we have said, it follows that the female constitution, during pregnancy, has great susceptibilities, and even peculiarities, which are highly important to be known and regarded, especially when prescribing for an acute disease. The process of sanguification is much more rapid during this period; as all the functions of the body are more quickly performed. Hence, at this time they bear so well the loss of blood; hence, the more frequent necessity of abstracting it; and hence the difficulty of overcoming the morbid actions of the system at such times.

There is, very often, much clamour raised against this operation; the depletion of the pregnant woman. This is sometimes so great as to render it extremely difficult to subdue their diseases.[1] This prejudice, for so it truly is, is founded upon false views of the functions of the uterus, and the economy of the fœtus,

[1] The young or inexperienced practitioner must not be betrayed into over bleeding in cases of pregnancy, by the sizy appearance of the blood; for such is the indomitable nature of the blood vessels, that the blood would appear sizy to the last drop in the body.

during the period of utero-gestation. It is imagined, that every ounce of blood the mother loses deprives the fœtus of a certain portion of it; consequently, that we should be very sparing of this fluid, that we may not rob the fœtus of its due quantity of nourishment. On this account, the clamour of the friends frequently arrests the lancet, when its employment is most essential to the welfare of the mother.

There are few mistakes of greater magnitude than the one just noticed; and, though founded in error, it has, nevertheless, often prevented, or very much interfered with the free and unbiassed practice of medicine. It very often causes the young practitioner to abandon some of the best established principles in the practice of his art; namely, 1st, that women bear the loss of blood better, when pregnant, than at any other period; and 2dly, that all the acute diseases by which they may be attacked require a more extensive use of the lancet. If, then, the interference of friends interrupt the free exercise of the judgment, the practitioner is reduced to the office of a nurse; for it is not he who prescribes, but the friends of the patient; while all the responsibility rests upon his shoulders. We have known much mischief produced by yielding to these mistaken views of the animal economy, at this time.

It should be recollected, that the circulation through the uterus has most wisely been rendered almost independent of the contingent condition of the general circulation of the system; and that no one viscus in the body is so little influenced by changes in this important function, as this organ, during the whole period of utero-gestation. The uterus contrives, if we may use the expression, to make its demands upon the general mass always successfully; or, at least, so long as there is any thing to ask for; hence, when almost every other organ is but sparingly supplied, we find the uterus abundantly furnished. Who, in the practice of midwifery, has not seen a fully-developed fœtus yielded by a mother in the last stage of a wasting disease, like phthisis pulmonalis, and where the quantity of circulating fluids was extremely diminished?

Is it to be supposed, then, in such, and in similar cases, that this could have happened, had the uterus had no more than a common participation in the distribution of the blood? Certainly not; since the quantity in every other portion of the body was reduced, by being deprived of part of their usual supplies. But it may be said that the uterus, in this respect, only enjoys the property of amassing supplies, in common with other viscera; let this be so; it is not a part of our present purpose to inquire into it; all that we insist on at this moment is, that the uterus absolutely possesses this power.

We may be told that the fœtus is by no means so secure as is represented, when the mother suffers considerable losses of blood; and they will attempt to illustrate this, by showing that the child often perishes from uterine hemorrhages. This is true; but it does not interfere with our remark; for we have not said that the uterus cannot be exhausted of blood, if blood be taken directly from it, as in floodings: we have only declared, that when this fluid is drawn from the general system, as in bleedings performed for the relief of disease, that very large quantities might be abstracted, without making the uterus give up any portion of what it absolutely possesses; and this is strictly true. But, on the other hand, it must not be supposed that pregnancy, merely as such, requires blood-letting. This error is as great as the one we have just attempted to remove; for we make it a constant rule in practice to discountenance blood-letting, unless there exist some inconvenience or disease to demand it.

2*d*. *Of Purging during Pregnancy.*

The pregnant woman does not bear purging so well as one who is not so: or rather, if this operation be carried very far, there is a risk of producing abortion, owing to the strong consent between the uterus and rectum. Hence, the occurrence sometimes of this accident, from a profuse diarrhœa, or a violent dysentery. Therefore, some caution is required, in treating the diseases of pregnant females by purging; for if carried to a great extent, it may do mischief. But let us be understood exactly on this head, lest we deprive females of the advantages of this remedy, in the acute forms of disease. We mean that a pregnant woman would not bear, with safety, as much purging, as if she were not pregnant; yet she bears it with advantage, when carried to a considerable extent, especially if tenesmus be not excited, either by the quality of the drug employed, or by the accidental severity of the operation of a medicine, otherwise generally eligible. In a word, we believe that a pregnant woman will bear, without risk, any common or necessary degree of purging, unless she be prone to abortion.

We should suggest caution in the choice of purgative medicines, rather than forbid the employment of this evacuation, as a remedy; for, with the pregnant woman, much depends upon the selection. All such as act with great force upon the bowels, should be avoided; such, for instance, as are classed among the drastic purgatives, as scammony, gamboge, colocynth, aloes, &c.; because each of these produces, during its operation, great irritation in the rectum, and very frequently excites tenesmus.

It is this peculiar irritation which renders any cathartic unsafe that might produce it; no matter to what class of cathartics it may belong; for, if castor oil, magnesia, or any other mild cathartic were to produce this effect, it would be as equally improper, as any of the drugs prescribed above.

Hence we see abortion frequently occur from dysentery; and but very rarely from diarrhœa, however profuse. Cases of habitual abortion, which are preceded by severe diarrhœa, might be considered as exceptions to this rule; but this is, perhaps, more specious than just. For in all the instances which we have witnessed of this kind of diarrhœa, there was more or less tenesmus accompanying it; and it is with us a doubtful point, whether this diarrhœa is not, in such cases, a concomitant, rather than a cause. For there is no fact better established, than that there exists a strong sympathy between the uterus, (and, perhaps, the mouth of this organ particularly,) and the rectum. We witness this oftentimes in the commencement of labour; during its progress, or towards its termination.

We have more than one patient, whose labours always commence with diarrhœa; that is, so soon as the os uteri is stimulated to dilatation, the bowels yield. Now, in abortion, there must always exist some irritation at the os uteri, or it would not yield to the impulses of the fundus and body of this organ, for it is by no means a mechanical operation. And so soon as this nisus is perceived, (for the uterus prematurely throwing off its contents, is a kind of tenesmus of this organ,) the rectum sympathizes with the uterus, and a diarrhœa, with tenesmus, is produced.

If this be objected to, by saying, that abortion is sometimes prevented by the application of opium to the rectum, thereby removing the disease, or quieting the irritation which invited the action of the uterus; we would answer, there is not the smallest proof from this circumstance; since the sympathy between these parts is reciprocal; and, consequently, when a remedy is applied to the one it will influence the other. In proof of this, how often do we successfully apply remedies to the rectum, when we mean its effect shall be felt by the uterus alone?

We believe, then, it is not so much the frequency of the discharges from the bowels produced by the operation of purgative medicine that does the mischief in pregnancy, as the peculiar, and oftentimes severe irritation it produces in the rectum.

3d. Of Emetics during Pregnancy.

Emetics should be given sparingly to pregnant women: they

are rarely eligible after the fifth month, and should only be considered as remedies of necessity. Towards the last months of pregnancy, their operation in properly, or freely evacuating the stomach, is oftentimes uncertain, as this organ can be very little aided in its efforts by the other powers concerned in this operation; and from the abdominal muscles being very much upon the stretch, much pain is experienced in their contractions during the efforts to vomit, followed, sometimes, by severe cramping pains.

We have known severe and permanent pain produced by the exhibition of an emetic at the latter period of utero-gestation, and from which the patient was not entirely relieved until the termination of her labour.

In the early months, nature oftentimes establishes this process for wise purposes; but even then, the action of the stomach is rather frequently, than violently excited; and it may generally be said, there is more nausea than vomiting. But, even in the early periods, emetics are to be used with caution; and when determined on, the ipecacuanha should be made choice of.[1]

4*th*. *Of Blisters during Pregnancy.*

Blisters are to be used with great caution with pregnant women: owing to the great excitability of their systems, they produce a great deal of pain during their operation; and this is not always followed by benefit.

During pregnancy, blisters are much more apt to produce strangury than at other times; and when this occurs it is almost sure to be followed by the most distressing and untoward symptoms. We have seen entire retention of urine follow their use; which has been only relieved by the catheter; and attended with such distressing inclination, and violence of effort, as to be only surpassed by the pains of labour. Bloody urine has sometimes followed the use of a blister; and a discharge of mucus from the internal face of the bladder has continued for a long time after. It is true these are extreme cases; but they nevertheless occur, and should, therefore, suggest a great deal of caution in their employment, especially in the more advanced periods of gestation.

We think we have seen two instances of premature labour from

[1] A practitioner was called, about two years since, to a lady of my acquaintance, who was in her last month of pregnancy. He said she was very *bilious*, and must take an emetic. This he gave her, and it vomited her so severely as to induce the action of the uterus, which did not cease until premature labour took place, and finally delivery was the consequence: both mother and child had nearly fallen a sacrifice to this mischievous proceeding.

the action of blisters; yet we must acknowledge they have been advantageously employed to prevent abortion.[1]

CHAPTER X.

ON SOME OF THE DISORDERS OF PREGNANCY.

Every experienced accoucheur is aware, and it is highly important to the young practitioner to be informed, that the pregnant state imposes a peculiar character upon many common affections of the system; and that it gives rise to a morbid condition of some particular organs, certainly during a part, and sometimes during the whole term, of its continuance.

We shall endeavour to point out, in what follows under this head, the peculiarities just spoken of; together with the particular plan or modification of treatment in each of these affections, that the state of conception requires; for it is essential to successful practice that the changes effected in the nervous and sanguiferous systems from this cause be well understood. We shall, therefore, treat of the most common, as well as of the most important of these diseases, as modified by, or originating from, the gravid state of the uterus. We have already pointed out the restrictions and precautions that certain therapeutical agents require, under the circumstances now contemplated.

Sect. I.—*On the Febrile Condition of the System during Pregnancy.*

From what has just been said it would appear, that the system of the pregnant woman is almost always labouring under a degree of excitement not common to it at other periods; and, consequently, that it will ill bear stimuli. But this acceleration of pulse, and susceptibility to stimuli, must not be looked upon as a state of absolute disease, when nothing more attends; it should only be regarded as a state which may be easily operated on by morbid or other agents, and hence the proneness of the system to fever, from even slight causes.

[1] We would by no means employ blisters to prevent abortion, but would suggest the propriety of their trial in cases where every thing else had been tried in vain: they have been useful in such cases. I suggested their employment long ago, in Rees' Cyclopædia, article Abortion.

Dr. Denman conjectures, from the universality of this febrile disposition, that "when duly regulated, it is probably intended to answer some important purpose to the child." He thinks there is something like proof, "by the blood of the pregnant woman, which, independently of disease, is always found to have what is called a sizy appearance, though of a peculiar kind, and evidently very different from that which is observed in cases of inflammation, and which may be considered as a consequence of some new and specific action," p. 233.

It is a fact notorious to almost every body, that the blood drawn from a pregnant woman exhibits an appearance very different from the blood of a healthy woman who is not pregnant. This difference in the aspect of the blood, in the pregnant woman, depends upon a separation of the red globules from the coagulating lymph; while no such change is observed in the other. Dr. Denman declares this to be "evidently very different from that which is observed in cases of inflammation." This is by no means so evident to us—the white, or rather yellowish coat, observed upon the surface of both these bloods, unquestionably consists of the same material, namely, the coagulating lymph. The difference which he declares to be so evident, unfortunately, he has not pointed out; and it certainly remains to be proved, that this coat, in both instances, is not owing to an alteration produced by the same agency; namely, by that peculiar arterial action attending on both pregnancy and inflammation.

Mr. Hewson first taught us, that when this coat appeared on the surface of drawn blood, it was owing to the thinning of the serous parts of this fluid, which enabled the colouring matter and other denser parts of it to separate, and precipitate themselves to the bottom of the vessel. That the density of this "coat" may differ in two instances, we have no objection to admit, since this will not prove that both are not one and the same thing; namely, the coagulating lymph. Besides, to our view, the cause of this peculiarity appears so analogous in both instances, that we do not hesitate to admit them to be the same; namely, an increased arterial action, which we call inflammatory, for want of a more definite term.

We have already said that this condition of the arterial system is so general, as almost to force us to the belief that some specific object is attained by it—but what this condition is, can at present only be conjectured.

Dr. Denman supposes it may contribute to some good to the child; but how this is effected, he has not informed us. We will, therefore, offer a conjecture upon this subject. It seems now pretty generally admitted, that the fœtus in utero is not nourished by blood furnished directly by the mother; that is, there are no

continuous vessels from mother to child; consequently, the communication between the two must be indirect.

The most probable manner in which this indirect mode is carried on, is that of Schreger, as published in his dissertation "De Functione Placentæ Uterinæ."

He says, that "the uterine vessels pour nothing but serous fluids into the spongy tissue of the placenta; and that the uterine portion of this mass is not as high-coloured as its corresponding, or fœtal portion. And that the blood which circulates in the uterine vessels of the mother is already too highly charged with carbon and other heterogeneous matters, to serve as nourishment for the fœtus; it therefore only exhales its serous part, which is purer *and more highly oxygenated.*" Agreeably to Schreger, then, the placenta performs, as regards the fœtus, the office of a lung, in which the blood is revived, and becomes better fitted for nourishing the fœtus, and the purposes of life.

He also has a new theory for the uses of the umbilical vein. He says, "The serous fluid thrown out by the uterine arteries into the maternal portion of the placenta, is absorbed by a set of lymphatics which carry it along the umbilical cord to the thoracic duct; from thence to the left subclavian vein; the superior cava; the heart; and from thence to the aorta, by means of the arterial canal. From this artery, after being mixed with the blood and hematose by the action of the vessels through which it has passed, it is carried to the umbilical arteries, which return it to the placenta. When it has arrived here, it is not poured into the cellules to be returned to the mother, but passes into the umbilical veins, whose radicals accompany those of the umbilical artery. Nevertheless, the lateral pores of these arteries deposit the fluid which the fœtus could not elaborate, or which requires to be again submitted to the action of these organs, before it can serve as nourishment."

This highly probable and ingenious theory would lead us to conjecture that the excitement in the arterial system so invariably produced by pregnancy, is intended to have the blood more highly oxygenated, and, at the same time, from its increase of fluidity, to permit the lymph and serum more easily to be separated from the other portions of the blood in the maternal portion of the placenta, and by this means convey an additional quantity of oxygen for the purposes of the fœtus. The vermilion colour of the blood shows it is highly charged with this substance.

May we not in this way account for the fœtus in utero being so well sustained, while the mother is lingering in the last stage of phthisis pulmonalis? And on the other hand, explain the frequency of abortion and premature delivery, in almost all the cases of small pox, measles, scarlet fever, &c., where the sanguineous system is tending to typhoid action? And also in other cases

not of the exanthematous kind, where this typhoid disposition prevails? So also in puerperal convulsions, where the paroxysms almost suspend respiration.

This excited state of the sanguiferous system must not always be looked upon as bespeaking a *morbid* condition of it; for were this always to be rigorously enforced and acted upon, much mischief might be done; for, as it is, women frequently suffer from the injudicious use of the lancet, or the too frequent employment of cathartics. It should be considered only as a disease, when a mischievous tendency is perceived, by the formation of fever; or in local determinations, giving rise to pain or other inconvenience, as headache, giddiness, imperfect vision, difficulty of breathing, pain in the side, which is augmented by breathing, a full, bounding pulse, and a hot dry skin, and especially, if these exacerbate, either in the evening or in the morning. When either of these conditions happen, the system calls for remedies.

A few ounces of blood abstracted from the arm; a vegetable diet; and keeping the bowels open by any of the mild purgatives, will be found sufficient for the immediate removal of this state of the system. If acidity prevail, magnesia will be the best purgative we can employ; if there be no acidity, pills of rhubarb; castor oil; Seidlitz powders; sulphate of magnesia; or flour of sulphur, will be found best. All stimulating substances should be carefully refrained from; every kind of liquor should be prohibited—water alone should be the drink.

All fatigue should be avoided; crowded or heated rooms should be shunned; and all undue exercise, under the pretence of "wearing off the fever," should be forbidden.

Dr. Denman is a strong advocate for exercise during pregnancy, and cites, as instances of its usefulness, the lower class of people, who are obliged to take much of it. We are always unwilling to differ with this gentleman, though oftentimes obliged to do so, as he furnishes so many opinions from which we cannot but dissent. The case before us is one of many, on which our experience will not permit us to do otherwise than to differ. For we have always found, that those women whose habits of life did not, from their infancy, oblige them to be much upon their feet, were always injured by using much exercise, because it was thought "useful to their situation." Besides we are very far from thinking that the lower class of women bear the consequence of pregnancy, the fatigues of labour, and the contingencies of the puerperal state, better than women in the higher walks of life.

In this country, we can declare, with much certainty, that a much larger proportion of the labours of those who are in the humbler conditions of life, have an unfavourable termination, than the same number of labours among the females in the higher

ranks of society. Besides, all analogy is against it, as the Doctor himself admits, by declaring, that quadrupeds "neglect their common pursuits, the gregarious disposition is suspended, and, if left to their own inclinations, gradually lessen their exercise, as they advance in pregnancy."

Errors in diet are almost constantly committed during pregnancy, than which, few things are more mischievous. We have already adverted to the tendency of the system to plethora, during this condition of the female; on this account it cannot fail to be injurious to overcharge or to over-stimulate the stomach.

No one circumstance has contributed so certainly to fix this error, as the vulgar speculation upon this subject; namely, the necessity the female is under to prepare nourishment for two beings, at one and the same time; that is, for herself, and the child within her. She is, therefore, constantly recommended, to eat and drink heartily; and this she too often does, until the system is goaded to fever; and sometimes to more sudden and greater evils, as convulsions or apoplexy.

Mrs. ——, pregnant with her first child, complained of slight headache; heat and restlessness at night; disagreeable taste in the mouth; a furred tongue in the morning; loss of appetite, or rather disgust to food, and constipated bowels. She was near her seventh month of pregnancy. She was directed to be bled; to take doses of rhubarb and magnesia; to drink rennet-whey, and use nothing stronger than water as drink. In a few days she was perfectly well, and returned at once to her old habits of full-feeding. She soon had a return of her old symptoms, which were relieved in the same manner, as just stated. After continuing the moderate plan of living for some time with great advantage, she was told she was very wrong to live so abstemiously, as it would weaken both her and her child so much, that much mischief would follow. She obeyed the advice of her ill-judging friend; the consequence was convulsions; from which she was saved with difficulty; but her child perished.

Sect. II.—*Of vomiting during pregnancy.*

In the early part of pregnancy, this effort of the stomach is considered among its rational signs; and it seems to be instituted for the purpose of preventing or subduing plethora. Its advantages, however, are confined to the early periods. When it continues after quickening, or renews itself with severity towards the latter period of gestation, its usefulness is equivocal, if not decidedly mischievous.

Dr. Denman says, "If the vomiting should not be violent, and occur only in the early part of the day, though very troublesome, it is so far from being detrimental, that it is generally found to be

serviceable, by exciting a more vigorous action of the uterus, by bringing the stomach into a better state," p. 234.

This appears to us a curious kind of reasoning; for, how vomiting is to be useful, by producing more vigorous action of the uterus, when that action is not required, or would be certainly mischievous if excited, we cannot comprehend. Or, how vomiting can bring the stomach into a better state than it would be, when there is neither a necessity nor a disposition to this effect, is equally unintelligible. That the efforts of the stomach may be useful in removing offensive matters from it, when these matters produce nausea or vomiting, we can readily comprehend; but this certainly does not bring this organ into a better state than it was before such matters had deranged it.

Vomiting we believe to be only useful as it may reduce or prevent plethora; and for this purpose a very moderate degree of it is all that is necessary. For this end is almost always answered in one of two ways; first, by discharging the food almost immediately after it is taken down, thus preventing its digestion by throwing it up; secondly, by severe and distressing nausea, without much vomiting, thus controlling the inordinate actions of the system by this subduing sensation and by diminishing or suspending the powers of digestion. Now, this is for the most part only useful, as we have already said, in the earlier months of pregnancy; for, in the latter months, the increasing demands of the fœtus generally keep down the disposition to plethora.

But, however useful the act of vomiting may be in the earlier periods, it becomes sometimes a most dangerous disease when continued through the greater part of the period of gestation. We have seen it involve the patient in imminent danger, from its indomitable nature, and from not being amenable to remedies.

We have seen several instances where we thought it would be right to bring on premature labour, and would in one instance have done so, had not this taken place spontaneously, very soon after it had been determined on. In such extreme cases, we think it every way reconcileable to the most scrupulous morality, to induce premature delivery for the preservation of the mother. But it should also be recommended to the attending physician, in such cases, never to perform this operation, unless it be sanctioned by the result of consultation.

The sickness commonly occurs as soon as the patient leaves her bed, and frequently harasses her for two or three succeeding hours. The matter thrown up is usually a sour, tenacious mucus; at other times, a thin, extremely acid water, which no wand then even excoriates the fauces, and sets "the teeth on edge." At other times, bile accompanies the discharge even in considerable quantities. When bile is thrown from the stomach, an emetic of ipecacuanha will frequently be found useful, and may, in the

early months, be given with safety. For the most part, this vomiting is attended with confined bowels; the appetite is either voracious, or nearly destroyed; but almost always whimsical; and, what is oftentimes remarkable at such times, the most unpromising, and apparently preposterous article, will not only be most acceptable to it, but best suited to its wayward humour.

The vomiting, however, rarely proceeds to any very dangerous length; and as rarely requires a strict medical treatment; a pro re nata plan is, for the most part, all that is required. I have found a glass of warm water or chamomile tea, taken so soon as nausea is felt, very frequently abridge the sickness, by immediately inducing vomiting, or by composing the disturbed stomach. Should much acidity prevail at such times, a glass of soda water will have a very good effect: or what succeeds admirably sometimes, is the soda in the following form:—

℞. Bi-carbon. sodæ, ʒjss.
Pulv. G. Arab. ʒij.
Ol. menthæ, gut. iv.
Sacch. alb. ʒij.
Aq. Seltzer. ℥iv. M.

Of this a table-spoonful is to be taken every hour or two, as occasion may require.

Should the bowels be in fault by their tardiness, small doses of calcined magnesia in a little milk, will be found highly useful. If nausea and frequent vomitings occur during the day, and the food be thrown up, the patient should be confined to a table-spoonful of milk every fifteen or twenty minutes, and no one thing beside; this rarely fails to tranquillize the stomach, and enable it to take food with advantage: we may occasionally add a spoonful of lime water to the milk, until the stomach be relieved.

But such is the predominance of acids, that none of the antacids is capable of overcoming it, though administered with a liberal, or even a daring hand. I rarely persevere in the use of the alkaline remedies, when I find that considerable doses will scarcely have a temporary effect: when this is the case, I recommend the use of acids, for the relief of this most distressing state of the stomach. Both vegetable and mineral acids have been employed by me, with perhaps about equal success; but the vegetable will merit the preferance in general, on account of the teeth. I have, in several instances, confined patients, for days together, upon lemon juice and water, with the most decided advantage.[1]

In two instances I have witnessed the best effects from substi-

[1] One lady took the juice of a dozen lemons daily, and nothing besides, for many days together, with the most marked advantage. This lady, in her last pregnancy, ate large quantities of ice, with great comfort to herself—she ate nearly a quarter peck a-day.

tuting a glass of iced water, for tea or coffee in the morning, by which the patients were enabled to retain a cracker or two upon their stomach, which would not have been the case, had they taken either of the other substances. When the vomiting is so persevering as to discharge every thing from the stomach as fast as taken in, the bowels should be carefully evacuated daily, by mild injections; permitting these to act rather by their bulk than by their stimulus. Should the pulse be full, as it almost always is under these circumstances, a little blood should be taken from the arm; more especially if headache attend. Should pain, and a sensation of burning about the region of the stomach be felt, much good is experienced by the application of a few leeches to the part, so as to abstract five or six ounces of blood.

I have repeatedly found much benefit from the use of the spirit of turpentine three or four times a-day, in twenty-drop doses. This medicine is very easily taken, if mixed in cold water sweetened. When the system is not excited to febrile action, and where the stomach rejects every thing almost as soon as swallowed, I have often known a table-spoonful of clove tea[1] act most promptly and successfully.

With respect to the diet of patients so circumstanced, it would be in vain to point it out; as any plan we could devise would scarcely apply to any two patients—I generally direct the use of such articles as their experience has proved best suited to their condition; and, sometimes, it is truly astonishing to observe the waywardness of the stomach upon such occasions. I have lately had a patient who could retain no article, except Indian meal cakes baked pretty hard upon a board—these uniformly kept down, and she literally lived upon them for weeks.

Our experience of opium confirms, in a great measure, the observations of Dr. Denman, on the use of this drug. He says, "In cases of excessive vomiting, opium in tincture or substance is generally given, and often with great advantage. Perhaps no well-founded objection can be made to the occasional use of opiates, when violent pain, or any other urgent symptoms demand them. But I have persuaded myself, that their habitual or very frequent use, is prejudicial to the fœtus," p. 235.

We think we have found the solid opium newly made into a pill, of at least two grains, the best form, when given by the mouth; but the most decidedly useful mode is by enemata. An enema may consist of a gill of lukewarm water and a tea-spoonful of laudanum. This may be repeated pro re nata.

We have lately found the most prompt advantage, in two or three cases of excessive vomiting, from a plaster applied over the

[1] This tea is made by bruising about twenty cloves, on which you pour a half pint of boiling water, and permit it to stand covered until cool.

region of the stomach, composed of equal parts of opium, camphor, and hard soap, moistened, sufficiently to spread, by laudanum.

Sect. III.—*Heartburn during Pregnancy.*

This very distressing symptom is sometimes one of the first the woman experiences after impregnation—at other times it does not make its appearance until gestation is pretty well advanced: and sometimes is absent altogether. It is generally very distressing and very difficult to subdue. I have known large and repeated doses of the alkalies given, with scarcely a temporary truce following their exhibition, much less permanent benefit; in consequence of which I have, for many years past, ceased to urge them in large quantities, where I find smaller ones produce no effect. In such cases I think it better to abandon the attempt to neutralize the acid, and begin with the use of the acids, so soon as the other class of remedies shall prove useless.

Dr. James, in a note, (see his edition of Burns,) makes the following remarks upon this condition of the stomach: "The late much regretted Dr. Young of Maryland, in his ingenious experiments on the digestive process, has almost reduced it to a certainty, that the acid which exists in the stomach is to be referred to the liquor gastricus; that it is the phosphoric acid, and that the acidity of dyspeptic and pregnant women, is owing to the morbid quantity of this acid. Hence, as he justly remarks, the superiority of lime water as a corrector, from its great affinity to the phosphoric acid," p. 219.

He recommends, from his own experience, the formula of Dr. Sims for this complaint, viz.

℞. Magnesiæ Ustæ,	ʒj.	
Aq. Ammoniæ puræ,	ʒj.	
Sp. Cinnam.	ʒiij.	
Aq. puræ,	℥vss.	M.

Two or three spoonfuls to be taken either occasionally, or when the symptoms are more continual, immediately after every meal.

I have already, under the head of vomiting, mentioned the advantage of acids, to counteract the acidity of the stomach, and they well deserve a trial. The vitriolic, or the citric, may be used freely in such cases; but the latter, as already observed, merits the preference.

Magnesia and chalk are in familiar use; and in moderate cases are every way competent to the exigency, especially the former. Magnesia should always be preferred to chalk, except a looseness of bowels accompanies this complaint. The chalk is never so pure as magnesia, and is always sure to constipate the bowels—

sometimes it is used in immoderate quantities, and then it is always with decided injury. I formerly attended a lady with several children, who was in the habit of eating chalk during her whole term of pregnancy; she used it in such excessive quantities as to render the bowels almost useless. I have often known her without an evacuation for ten or twelve days together, and then it was only procured by enemata; the evacuations were literally chalk. Her calculation, I well remember, was three half-pecks for each pregnancy—she became as white, nearly, as the substance itself; and it eventually destroyed her, by so deranging her stomach, that it would retain nothing upon it.

When heartburn is moderate, it may be relieved by soda water, lime water, and milk, and the occasional use of magnesia. The operation of these substances, in the cure of an acid stomach, is easily understood; but the action of a few blanched almonds, or a few roasted ground nuts, is not so easily explained; yet both of these substances I have known most successfully employed where the complaint was mild. They should be taken from time to time as the acidity may prevail.

Confining the patient to any one article of diet, of either the vegetable or animal kind, is sometimes productive of great advantage; as simple boiled rice, oysters, milk or cream, or very sweet butter and stale bread, &c.

Costiveness is very common, and should be carefully guarded against; the diet should be made to conform to this end, whenever practicable; where the stomach will bear bread or biscuit, they should be made of unbolted flour. The ship bread, as it is called, I have occasionally found to answer a valuable purpose—but where this is not sufficient, or it cannot be used, I have found the following pills of great advantage, when properly persevered in:—

℞.	Gum Aloes. suc.	ʒss.
	Pulv. Rhæi.	ʒi.
	Ol. Caryoph.	gut. iv.
	Sapo Venet.	gr. viij.
	Syr. Rhæi. q. s.	M. f. pil. xxx.

One of these every night, or every other night, as may be found necessary. One of these pills is generally found to be sufficient; but the dose must be determined by the habit of the patient.

Sect. IV.—*Of Salivation during Pregnancy.*

The sympathy between the salivary glands and the impregnated uterus is, perhaps, as remarkable as any that takes place. In a very moderate degree it may be considered as a pretty ge-

neral attendant upon gestation; as almost all women, at such times, have more than an ordinary quantity of saliva secreted. In this mild form it will scarcely require attention; for it may even pass without notice. But it becomes very distressing and enfeebling, when excessive. It is almost always accompanied with acidity of the stomach, and constipation of the bowels: the fluid discharged from the mouth, for the most part, is perfectly colourless and transparent; at other times, it is more tenacious and frothy, and the quantity poured out is sometimes incredibly profuse. It almost always has an unpleasant taste, though not attended with an offensive smell;[1]—it keeps the stomach in a state of constant irritation, and not unfrequently provokes vomiting, especially if the saliva be tenacious, and require an effort to discharge it. At night it is often very troublesome, interrupting sleep by the frequency of the necessity of opening the mouth.

If it continue long, the woman becomes weak, both from the quantity of fluid poured from the mouth, as well as the inability to take and retain sufficient food upon the stomach. I have never known this complaint to prove fatal; though I have witnessed two cases in which the patient was in great jeopardy—one of which I will relate, as it is remarkable for the extent to which the salivation ran.

I was called upon to prescribe for Mrs. J., who was advanced to the fifth month of her pregnancy. At the second month she was attacked by a profuse salivation; she discharged daily from one to three quarts of saliva; and was at the same time harassed by incessant nausea, and frequent vomiting: so irritable was the stomach that it rejected, almost instantly, any thing that was put into it. She now became extremely debilitated; so much so, as to be unable to keep out of bed; and when she did attempt to sit up, she would faint, if not quickly replaced.

From a belief that the affection might be local, astringent gargles were freely employed, with marked disadvantage. A large blister was next applied to the back of the neck, with decided, but transient benefit—that is, the salivary discharge was less, the nausea diminished, and the vomiting less frequent; but this favourable impression was but of three or four days' duration; for, after this time, all the unpleasant symptoms returned with their former severity. An emetic of ipecacuanha was now exhibited, followed by a cathartic of rhubarb and magnesia, without the smallest benefit;—soda water, lime water and milk, milk itself, &c., were, in turn, unavailingly employed. I now put my patient upon a diet altogether of animal substances, and ordered ten drops of

[1] Dr. Campbell says, "It is an infection of the salivary glands (which are sometimes swollen and tender) principally; in which the mucous membrane of the mouth participates to a certain extent." The left parotid was affected in one case. The gums are neither spongy nor ulcerated.

laudanum morning and evening, and fifteen at bed-time: this plan succeeded most perfectly in the course of a few days; the nausea and vomiting ceased, and the discharge was reduced to less than a pint per diem; and, perhaps, the force of habit had no inconsiderable agency in the production of this quantity. The bowels, during this plan, were kept open by the extract of butternut and rhubarb, in the form of pills. The lady never had any return of this complaint in her subsequent pregnancies.[1]

As a general plan of treatment in this complaint, either when moderate or severe, I endeavour to destroy the acidity of the stomach by the various antacids; to keep the bowels free, by the frequent use of magnesia; rinsing the mouth often with lime water; and the use of solid animal food; together with a strict injunction to the patient to resist the desire to discharge the saliva from the mouth, as much as possible.

This complaint, when moderate, almost always abates, if it does not altogether cease, after the fifth or sixth month; but when severe, its period is uncertain. A lady informed me, that this affection continued with considerable force during the whole period of gestation, in one of her pregnancies.

Sect. V.—*Of Pain in the Right Side during Pregnancy.*

A little after, and seldom before the fifth month, the woman is sometimes attacked with a deep-seated, and rather obscure pain, immediately in the region of the liver. It first begins with a very trifling sensation in this part, and gradually increases as gestation advances. It is rarely extremely painful; but is almost constant, both day and night; and is especially severe during the latter.

It is not increased by respiration, unless this be made very full, and then the pain is rather more acute than ordinary. No cough, as a necessary attendant, accompanies this complaint; but if one be present, there is an augmentation of pain, but not of the sudden and embarrassing kind which attends an inflammation of the pleura, or peritonitis, and may, therefore, by this circumstance, be easily distinguished from this affection, or an inflammation of these membranes. Besides, fever does not necessarily belong to this complaint; and if one be present, it may be considered as independent of it; and may, therefore, most commonly, be looked upon as coincident, rather than as a necessary consequence.

The woman, with a view of relieving this pain, leans almost constantly to one side when sitting; and if standing, she may be observed frequently to place her hand over the pained part, and

[1] For a similar case, and of much interest, see Churchill's Treatise on Diseases of Pregnancy and Child-bed, p. 75.

press it pretty forcibly. She often seeks relief, by stretching herself upwards, and maintaining this position as long as she well can; or until she finds herself somewhat relieved. She can lie upon either side; but better on the left than on the right.

A sensation of heat is frequently experienced in the pained part, at the time she may feel pain. This is sometimes very distressing; and is occasionally very permanent. The bowels are not necessarily influenced by this affection; they maintain, most probably, the condition they would be in, were this pain not present.

As pains in the side are familiarly treated by blood-letting, so it is almost always had recourse to in this complaint; but never, as far as we have observed, with the slightest advantage. Nor has any other treatment which we have advised been more successful. Leeching, cupping, and blistering, have in turn been employed without benefit. Indeed, we have now ceased to prescribe for this complaint, unless it be attended with some alteration in the circulating system; if this be disturbed, and the pulse tense and frequent, advantage is sometimes experienced from the loss of blood, and gentle purging, as this pain may be aggravated by this condition of the system. But in this instance, we prescribe for the general condition of the system, and not for the local affection—as we should have to do most probably as much were this pain in the side not present.

A woman, with her first child, is more liable to this affection than with the subsequent ones; unless she carry her child very "high," as it is called. After a woman has borne several children, the anterior obliquity of the uterus generally prevails, which frees her from the risk of this complaint; for it is caused, we believe, altogether by the mechanical pressure which the fundus of the uterus makes against the liver, as it mounts up in the progress of gestation. Our reasons for thinking that this is the cause, are, 1st, because the woman who has the fundus of the uterus thrown in advance of the symphysis pubis, is never troubled with this complaint so far as we have yet observed; 2d, because it never commences until after the uterus has risen some distance out of the superior strait; 3d, because the woman who has the fundus of the uterus thrown to the right side, is more severely afflicted, than if the right lateral obliquity of the uterus did not exist; 4th, because, after the eighth month has passed, the woman experiences great relief, if the uterus sink into the pelvis, as it is wont to do at this period; or undergoes that change the women term "falling;" 5th, because this pain is increased whenever the diaphragm is suddenly and powerfully forced down, as in coughing, and in sneezing, though it is not felt in ordinary respiration; 6th, because the pain increases almost in proportion to the development of the uterus, or the advancement of the fundus; 7th, because the woman feels less pain when

standing, than while lying; for when standing, the uterus sinks a little, and thus diminishes the pressure against the liver; 8th, because the woman can relieve herself, by placing herself in certain positions; as leaning to one side, or stretching herself upwards; and lastly, because very short women suffer most.

From this account of the cause of the pain in the right side, it will at once be seen, that nothing can relieve this affection but removal of the fundus of the uterus from its contact with the liver. It may be asked, if this explanation be true, why do not all women suffer it? The answer is easy; all women have not the fundus of the uterus to press against the liver; because all have not the right lateral obliquity; because many have a tendency to the anterior obliquity, after the third or fourth child; and, in neither of these instances, does the fundus press against this viscus.

SECT. VI.—*Of Inquietude and Want of Sleep during Pregnancy.*

Many women experience much inquietude towards the latter end of pregnancy. This is so annoying at times, as to prevent sleep. The limbs are agitated by involuntary contractions of the muscles, which, by the frequency and suddenness of their motion, instantly interrupt the sleep, to which the woman was at the moment strongly inclined.

In most cases, there is a strong desire to sleep; but it cannot be indulged in, in consequence of this particular state of the nervous system;—this ennui of the limbs, if we may so term it. We have known it so severe at times, as to make the woman dread to lie in her bed; for she is sure, until near daylight, to be doomed to constant restlessness. To relieve this inquietude, she traverses the room, until fatigue, or diminution of the paroxysms, affords the long-desired rest. This repeated loss of sleep does not sensibly impair the health of the woman: for, as Dr. Denman very correctly observes, "after a short repose at the dawn of day, she seems as much refreshed as after the most quiet night."

Dr. Denman's method of treatment does not by any means comport with his theory of this affection. He says, "Perhaps the confinement of the air of the room, and the heat of the bed, may be the immediate cause of this complaint; but I have generally considered them as arising from the constant and strenuous demands for nourishment, made by the child upon the constitution of the parent; for it is remarkable, that those women who suffer most on this account, though reduced in appearance, bring forth lusty children, and have easy labours," p. 245.

From this explanation, and from what he afterwards says, it would seem that the fœtus makes larger demands than the mother can well supply: now, were this so, there should be a deficiency

of blood in the general system of the mother; but this is not the case; for the Doctor recommends almost the only remedies we have seen useful in this case; namely, "bleeding in small quantities, and the occasional use of cooling and laxative medicines." Now, is it not self-evident, that were a deficiency of blood in the mother's system the cause of this inquietude, that it could not possibly be relieved, by diminishing, still more, the quantity of blood? We believe, that this inquietude arises from that peculiar irritability of the nervous system, which seems so constantly to attend upon a *fulness* of the system, rather than on a deficiency of blood. In proof of this, the pulse is always quickened and full in the evening and during the night; and is a true exacerbation, or febrile paroxysm, which spends itself by morning, and permits the patient to sleep at that time. Again, bleeding, purging, low diet, cool air, and cold water, are the best remedies for this complaint.

The quantity of blood to be drawn, must be regulated by the fall of the pulse; and it must be repeated pro re nata. A mattress should be substituted for a feather bed, even in winter; the room should be well ventilated; and the patient should be prohibited animal food, suppers, or any stimulating drink. The bowels should be kept gently open. Dr. Denman says, that "a glass of cold water drunk at bed-time, is not a contemptible remedy." We know that bathing the face and hands in cold water is an excellent one, and should always be resorted to.

Dr. Denman says, "Preparations of opium have little effect, unless they are given in large quantities, and often repeated." This is the very reverse of our mode of exhibiting the preparations of opium. We never prescribe opium in any form, unless the necessity is very urgent, and when bleeding and the other remedies have failed; and when we do order it, it is always in small doses. We prefer the denarcotized, or the acetated tincture, or black drop, to any other form of opium; of the first, we give twenty drops at first; of the latter, only ten; and if they do not tranquillize in two hours, we direct from five to ten drops more; believing, if this quantity does not succeed, a larger one will not: we, therefore, never urge its use. A hop "pillow" has sometimes succeeded admirably well.

After bleeding, &c., the Liq. Anod. Hoffm. answers, for the most part, admirably, and should always be tried.

Sect. VII.—*Of Costiveness during Pregnancy.*

It seems that this condition of the bowels is almost sure to attend the early periods and the latter stages of pregnancy. For the most part, it is only mischievous when excessive; though it

is always inconvenient. Dr. Denman is willing to attach some importance to this state of the alimentary canal; with what propriety, remains to be proved. I am fully persuaded, however, that it is only decidedly *injurious* when it exists in excess: when so, I have known much trouble to arise from it, and sometimes alarm for the safety of the fœtus.

When this state is allowed to continue beyond two, or at most three days, much disturbance is sometimes created by the generation of flatus, and colicky pains, with a frequent and unsuccessful desire to evacuate the rectum. When permitted to continue beyond this time, it is sure to occasion headache, flushing of the face, frequent desire to make water, and tenesmus. The stomach is also not unfrequently disturbed by heartburn, sour eructations, and vomiting, if these had been previously suspended; or an increase of them, if they had not ceased.

To those who may be occasionally liable to abortion, it is particularly desirable to have this state of the bowels altered; as we have every reason to believe it has, in a number of instances, caused it. We have known some ladies so regardless of consequences, as to allow this confined state of the bowels to continue for ten or twelve days together. One lady, in particular, had reason to blame costiveness for three consecutive miscarriages. When she became pregnant again, she was put under my care, with a hope that I might be able to interrupt this unlucky habit.

I learned from her, that so soon as she became pregnant, her bowels became so tardy, as not to have a spontaneous opening oftener than once in ten, or twelve, or fourteen days. Hitherto, she had concealed this condition from her friends, from the mere aversion she had to taking medicine, even of the most simple kind; and honestly confessed she thought her former miscarriages were altogether owing to this cause; but said, she began to feel there would be a criminal neglect on her part, did she permit this to continue; she, therefore, determined upon changing this habit; and was now willing to submit to any plan we would think proper to direct.

She suffered dreadfully from sickness of stomach, and vomiting; severe and constant headache; palpitation of the heart; and, now and then long-continued syncope. She was in her third month of pregnancy; and declared she began to feel as she had always previously done, for two or three weeks before she would miscarry; that is, she rested ill at night, had great thirst, severe pain in her back, together with considerable leucorrhœa, which, she observed, always preceded the more violent symptoms. At the time she was giving me this information, she had not had an evacuation for more than a week. Her pulse was full, frequent, and tense; face flushed, and skin dry and hot.

I directed the loss of a few ounces of blood; to have an in-

jection simply of flaxseed tea; to take small doses of castor oil, at intervals of two hours, until it should operate; to drink nothing but water, or molasses and water; to abstain from animal food and broths; to use light, but regular exercise; to take rennet-whey freely; and to eat no other bread but that made of unbolted flour. She readily consented to a compliance, and as faithfully performed her promise; for which she was amply repaid, in the melioration of all, and the entire extinction of some, of her more troublesome symptoms, besides carrying her child to the full period.

She was, however, chiefly indebted to the brown bread for the permanent soluble state of her bowels; for, after she had commenced its use, she had but very rarely to aid it by magnesia.

To women who are habitually costive, this bread is most important, and should always be used; and though not always sufficient to do away the tendency to constipation, it nevertheless renders any mild aperient much more successful.

A tumbler-full of rich bran tea, sweetened or otherwise, taken before breakfast, has had a very good effect upon the bowels. Coffee, sweetened with manna, answers very well; honey, where the stomach will bear it, is useful. Injections, made to act rather by their bulk than their quality, are exceedingly proper in all states of costiveness; but when it is excessive, *they should always be made to precede the use of purgative medicines:* we have seen much inconvenience arise from a neglect of this caution. The severe effort which is always required to discharge hardened fæces, is almost sure to produce hemorrhoids.

Mr. Burns says, this state of costiveness is "partly owing to the pressure of the uterus on the rectum, and partly owing to the increased activity of the womb producing a sluggish motion of the bowels." We would ask, in what does the "increased activity of the womb" consist? Is there an evidence of such activity? Is it not, at the period at which costiveness is most common, passive, and obedient to the distending forces within it? Would not abortion follow an increased activity of this organ? for we see no way in which the uterus ever displays "activity," but by contracting; consequently, costiveness cannot depend upon an "increased activity of the womb;" for did it contract actively, abortion would almost certainly follow.

This state of the bowels depends chiefly upon that irritation of the stomach which gives rise to either nausea or vomiting; and thus diverts or diminishes the regular or habitual force of the peristaltic motion of the lower intestines. As a proof of this, where there is obstinate costiveness, we almost always see an irritable stomach. Indeed, Dr. Denman remarks, that "the stomach of pregnant women is often in such a state, that no internal

medicines can be retained, and we are obliged to have recourse to clysters," p. 239, art. Costiveness. And, farther, we may add, that there exists between the rectum and the stomach a reciprocal influence of this kind; for the inordinate motions of the latter are most successfully allayed by irritating the former by stimulating injections.

But, let the cause of costiveness be what it may, it is always important to guard against it in the pregnant woman; but it should, as suggested above, be by the gentlest methods; for stimulating or drastic medicines must be carefully avoided.

For, though Dr. Denman informs us, that "experience has proved that abortion most frequently happens to those who are subject to too relaxed a state of the bowels," it does not prove that constipation is either useful or innocent.

Indeed, we are of opinion that though the fact is precisely as stated by Dr. Denman, yet it does not prove that diarrhœa, in such cases, is the cause of abortion; on the contrary, we are fully persuaded, that it is but the consequence of an irritation in the uterus to cast off its contents; and that the intestines, in these instances, only sympathize with this condition of this organ. We may perhaps be told, as an evidence that diarrhœa is the cause of abortion, that this accident has been prevented in such cases by the application of opium to the rectum. We believe it to be strictly true, that abortion has been prevented by this means; yet we cannot admit it as evidence of the fact insisted on; for this remedy is equally, if not more certainly useful in threatened abortion when used in this manner, when there is no diarrhœa. It quiets the irritation of the uterus, through the medium of that sympathy which is known to exist between these parts; as the same sympathy excites the intestines to looseness, when the uterus is the seat of irritation.

CHAPTER XI.

OF HEMORRHOIDS, OR PILES.

We have observed that the bowels of pregnant women are disposed to become costive; in consequence of which a tendency to piles is very often induced, which, if not early relieved, will end in inflammation, and extreme distention, sometimes, of the hemorrhoidal veins. We may add to this, the constant and strong pressure, which the increasing uterus exerts upon the vessels within the pelvis. Another cause may aid and confirm the

disposition to hemorrhoid; namely, the sedentary habits of many women during gestation.

Joined to all these, is the habit many sedentary women have, of using soft cushions to sit upon. This permits the vessels to distend, though gently compressed; and by and by a hemorrhoidal "fit" is produced. In others, again, piles are brought on by long standing; hence all such as are obliged to be a great deal upon their feet during pregnancy, are much disposed to this affection.

A sensation of fulness and aching is first felt in the verge of the anus; this is followed by a slight throbbing, which disposes the woman to make a pressure with her hand upon the part; swelling in various degrees soon succeeds, accompanied by more or less pain. As a general rule, the pain is in proportion to the size and degree of inflammation of the tumours which constitute the disease, and the degree of contraction of the sphincter ani.

Frank says that these tumours sometimes acquire a size equal to that of a goose-egg; the sphincter ani contracting upon them produces the severest suffering.—Traité de Médecine Pratique.

And that, in women, in consequence of the contiguity of the hemorrhoids with the vagina, that they occasion in this canal a heat and burning, and an itching; so as to render conjugal intercourse painful, and accompanied with a discharge of blood.—Traité de Médecine Pratique, tom. 3, pp. 339, 340. Such cases we have never seen; nor have we ever witnessed their preventing the descent of the head in the time of labour by their size, as stated by the same author.

We have said that the pain is generally in proportion to the size of the tumours, and the degree of inflammation, &c.; but this is not always so, for we have seen prodigious suffering from small-sized piles; and once witnessed the most intense, and long-continued anguish, from a pile not larger than a very small filbert. Why the pain was so intense, in this instance, we have never been able to account; it resisted puncturing, leechings, cold, hot, and anodyne applications, and purging. A horizontal position, with elevated hips, &c., for several days, appeared to be the only source of comfort to the patient.

Dr. Physick informed me, when speaking on this subject, that a patient of his suffered the most intense anguish from a tumour not larger than a pea, situated in the verge of the anus, and for which almost every probable remedy had been prescribed unavailingly—the patient was at last relieved by the removal of it by the knife.

The degree of distention which these tumours sometimes suffer is almost beyond belief. We have seen two or three at one time, of the size of small walnuts, of a very dark red, or modena

colour, or even livid; and of such exquisite tenderness, as not to permit the slightest touch, without great pain.[1] In these cases the sphincter ani acted like a ligature moderately drawn; and the tumours themselves had the appearance of strangulation. Indeed, Mr. Copeland[2] considers the action of the sphincter ani one of the causes of piles; especially in those who possess this power in a high degree, and who are, in consequence, subject to a spasmodic stricture of the rectum. In such persons, he supposes, that, at every attempt to pass the feces, a portion of the internal membrane of the rectum, with its vessels, is protruded and detained by the forcible constriction of this muscle; hence, the formation of piles.

Mr. Burns thinks this disease is "chiefly to be attributed to a sluggish state of the alimentary canal, communicating a similar torpor to the hemorrhoidal veins," p. 223. Now, we do not understand how torpor of the intestinal tube is to communicate torpor to the hemorrhoidal veins; or how torpor, any way communicated to these veins, shall give the phenomena of piles. Certain it is, a paroxysm of this disease is as frequently, or, at least, as readily produced by purging, as by costiveness. For, generally speaking, the paroxysm of piles takes place when costiveness is about to be removed, and not during the passive state of the colon and rectum. Costiveness, then, as a sign of the "sluggish state of the intestinal tube," is rarely the exciting cause of the disease in question; for it takes place with most certainty when this "torpor" is absolutely removed, and the bowels are stimulated to brisker action. Therefore, the mechanical pressure of the feces may have some agency in producing a "spell."[3]

Besides, it is familiar to every body, with what facility a "fit" of the piles is brought on by a brisk purgative, when the hemorrhoidal veins are varicose; nor is this, perhaps, difficult to understand, when we take into view, that the action of the bowels, and that for the returning of the blood through the vessels concerned, are in opposite directions; and that the peristaltic action of the colon and rectum must be superior to that of the hemorrhoidal veins; hence, the accumulation of blood in them, and sometimes their severe distention; and that this distention takes place the more readily as these veins do not possess valves.

Again, relief from suffering is sometimes obtained only by in-

[1] The degree of pain which attends the active stage of piles, depends very much upon the constitutional force of the sphincter ani. Where this is very active, and constricts the protruded pile with great firmness, much suffering will be endured; while an equal, or even greater degree of swelling, in lax and debilitated habits, will be attended by less.

[2] Observations on the Principal Diseases of the Rectum, &c., p. 68.

[3] Costiveness is not always necessary, either as a remote, or as an exciting cause to this disease. We have known this complaint to be occasionally violent, where the bowels were never costive for a day during a long life.

ducing a "torpor" in the rectum, by means of sedative applications, and opiate injections.

When this disease attacks the pregnant woman, it is almost sure to produce feverish excitement in the system; and this often attended with severe headach, and pain in the small of the back. Blood-letting is here clearly indicated; but the local is preferable to the general abstraction of blood. Six or eight ounces of blood should be drawn from the tumours, and their immediate neighbourhood, by leeches, and their bites encouraged to bleed after their dismissal, by the application of a soft bread and milk poultice. The bowels should be opened by the most gentle laxatives; the best of which, for immediate purposes, is the castor oil, when the patient may have no fixed aversion to it.

If leeches cannot be procured, puncturing them with the point of a sharp lancet in several places, will often afford great relief, when the tumours are much distended and very thin. But when the swelling is less, and the coats of the tumours appear thick and dense, we do not recollect to have seen any advantage follow puncturing. Probably we had better not employ it.

Local applications are rarely found to be of benefit during the very active stage of hemorrhoids; indeed, for the most part, they seem but to aggravate the pain, unless it be after leeching or puncturing; then, as already directed, a simple bread and milk poultice, or poultice of the flour of linseed, is sometimes found to afford much relief.[1] This application should always follow either of these operations; and it may be renewed frequently.

During this time, the patient should be kept in a horizontal position, with her hips elevated, and the knees drawn up; and when the leech bites, or the punctures have ceased to bleed, there is sometimes much comfort derived from cold applications; even ice itself. This is best managed by being enclosed in a small bladder, in which there is some water. A weak solution of the acetate of lead, that is, in the proportion of a scruple to eight ounces of water, and a few drops of the acetated tincture of opium, sometimes afford much relief.

It may be necessary to reapply leeches, or repeat the puncturing; this will especially be the case, when the sphincter ani acts as a ligature; for nothing effects the relaxation of this muscle like blood-letting. The bleeding may be followed by the poultices; and these by the cold applications, or the saturnine solution and the opium.

When the hemorrhoidal tumours are neither very large nor very painful, much advantage is sometimes obtained by discharging the blood from them by a very gentle, but persevering

[1] The poultices must be renewed every three or four hours: they should be thin, and always applied between very fine rags.

pressure by the ball of the thumb, or extremity of a finger. This succeeds best, where the sphincter ani is contracted upon the tumours; but, in order to secure the good effect of this pressure, the pile must be returned beyond the verge of the anus, by the finger following it within the sphincter. When the sphincter is relaxed, we have seen no advantage derived from this practice; as the vein prolapses again immediately. To succeed in putting up the pile, much patience must sometimes be exercised in making the pressure; for, if it be done suddenly, much pain is excited, and no advantage gained. Mr. Burns recommends, for the same object, a pressure made by the thumb and finger.

This disease is almost always more severe after labour than during pregnancy; and, though it is not strictly a disease of the female, she may yet be considered as more obnoxious to it than the male; and as it is an attendant upon gestation, and is almost always a follower of delivery, it seems every way entitled to our notice.

Much may be done during labour to prevent a severe "spell" of piles, by the accoucheur making a firm pressure upon the verge of the anus with the palm of his hand, guarded by a diaper, during the progress of the head through the external parts; and by carefully returning them immediately after the expulsion of the placenta, as the sphincter is now fatigued, and will not oppose their ascent. In lying-in women, this complaint rarely becomes severe until the fourth or fifth day; and then it is generally after the operation of the medicine which it has been judged proper to give previously to this time.

The hemorrhoidal veins sometimes swell enormously at this period, as they are probably weakened by the distention they have suffered during the progress of labour; and especially as they regain the power of contracting with great difficulty. They are, however, to be treated as above directed; except that we cannot use the cold applications with the same freedom. In order to prevent as much as possible the accession of this disease, with those who are subject to hemorrhoids after delivery, we should open the bowels a day or two earlier than is usual; that is, the day but one after the termination of the labour.

This should be done by the very mildest means; and small or divided doses of the purgative should be given, instead of a full dose at once. Thus, half an ounce of castor oil should be given; and repeated in four hours, if the first does not answer. Or coffee may be sweetened with manna, and the patient take a cup of it once in two or three hours, until the effect is produced. The lenitive electuary is also an excellent aperient at this time; the size of a nutmeg may be taken every three hours, until the bowels are stirred. The sulphate of magnesia in lemonade, in small doses, is also very gentle, and very certain. But the magnesia

itself, we think, is always productive of much irritation in the rectum at this time. Dr. Jackson of Northumberland, recommends, in very decided terms, rhubarb, as a cathartic in all stages of hemorrhoidal suffering.

All the more stimulating cathartics should be carefully avoided; and even the effects of the milder ones be stopped in such cases, when they appear to be proceeding too far—this may be readily effected by a few drops of laudanum.

The diet of the patient should consist altogether of the vegetable jellies, rennet, or cremor tartar whey: we should, for the time being, forbid tea and coffee, unless the latter is sweetened with the manna. Sago, tapioca, arrow root, or gum Arabic, rye mush and molasses, may be given freely; but they should always be made thin; and the bran bread should be eaten. Substances may be made palatable by a little lemon juice and sugar; they should be looked upon rather as drinks, than be considered as food. This plan has advantages which are rarely considered: it not only affords an ample, and very mild nourishment, but the recrement is less in quantity, as well as much less firm in quality, than that from more solid food. Milk, at this time, should be used sparingly, if not absolutely forbidden, as the curd becomes impacted in the rectum, and produces great irritation. We have known much inconvenience to arise from a perseverance in this article as a diet, from the great firmness of the feces.

The pregnant woman may derive both comfort and advantage from sitting in a demi-bath of cold water for five or ten minutes at a time, two or three times a day, when the complaint is advancing, or when about to retire; that is, after the severer inflammatory symptoms have abated, or before they are high.

During the progress of treatment, and for some time after, the patient should be as little as possible upon her feet. Sufficient attention is not paid to this circumstance; and the neglect of it obliges the woman to go through her troubles again. The vessels should be allowed to contract as much as they are capable of doing, before the woman is permitted either to stand or walk much; for the mere effects of gravitation will renew the complaint, when it has but imperfectly receded, or has but for a short time ceased to be troublesome.

We have said purging should be carefully avoided; but costiveness should be equally shunned. The patient, therefore, should have such a plan laid down, as will ensure one liquid evacuation per diem; this will be best effected, by using the bran bread constantly, instead of the common bread, or sweetening her food and drinks with the flake manna; this is a very convenient way of administering a gentle purgative. This article, then, will form an exception to the rule suggested above, of allowing no other than fluid nourishment. And when all inflammatory

action has ceased, she may be indulged daily with chicken water, or beef tea.

Should the bran bread be found insufficient to keep the bowels open, a large tea-spoonful of the following electuary should be taken at bed-time; either every night or oftener, or every other night, as its effects may be upon the bowels.

℞. Lac. sulph.
Crem. tart. āā. ℥ss.
Syr. commun. vel lemon. q. s.
F. elect.

Dr. Leake is prejudiced against the use of sulphur in this complaint; he says, "From what I have repeatedly seen of its effects, I cannot think favourably of it, having twice observed a very dangerous and profuse discharge of blood from the womb, occasioned by its liberal use."—Treatise on Child-bed Fever, vol. i. p. 173.

The experience of Dr. Leake, from its extent, should, upon most occasions, go for much; but in this instance, we think he has yielded to a prejudice, resulting from coincidence rather than from a conviction arising from correct observation. For, were the sulphur capable of producing such discharges as one of its common effects, it would certainly have been oftener observed by the doctor; at least it would have been confirmed by the observations of other practitioners. As regards ourselves, it is one of the most common of our prescriptions in this complaint; yet we have never seen any thing like the effect supposed to be observed by Dr. Leake; we are therefore inclined to believe, that the discharges of blood spoken of, must have been accidental, or coincident.

Dr. Good observes of this article, "Sulphur has long been regarded as a specific for piles; but I do not know that it possesses any other virtue than that of being a mild aperient. It seems, however, to be an aperient particularly calculated to act upon the large intestines; since, being soluble with difficulty in animal fluids, it dissolves slowly, and does not spend itself till it has descended to a considerable depth in the alvine canal. And it is on this ground, perhaps, if any, that it sometimes proves serviceable in the present disease."—Study of Med. vol. i. p. 237.

Dr. Cullen speaks favourably of the balsam of copaiva. He says, "I have learned, from an empirical practitioner, that it gives relief in hemorrhoidal affections, and I have frequently employed it with success."—Mat. Med. part ii. cap. v. p. 190. Of this medicine I can say nothing from experience; if it be useful in this complaint, it must, most probably, like turpentine, be in cases accompanied by discharges of blood.

Dr. Good seems to think differently; and he may be right, as he has experience of its effects on his side. He says, "I have

tried this medicine often, frequently without the slightest benefit, though I have varied the dose; and when it has appeared useful, it has been chiefly in the mucous piles." p. 237.

"Where the tubercles are not very sore, they will often yield to a layer of gypsum, or, what is better, fuller's earth, which, however, should be rubbed into as soft a paste as possible. This is a remedy which has been long employed on the continent; and I have sometimes prescribed it with singular advantage, and have known piles, when softish, and compressible, removed by it in a single night."—Study, p. 238.

These excrescences often remain of considerable size, and rather painful, even after the more active stage of inflammation has been removed; and, if they be neglected at this time, a return of them is most easily provoked. Experience has proved the value of the vegetable astringents for this purpose; but they are too indiscriminately used, not to make some caution necessary.

The astringents are indicated only in the decline of the inflammatory stage of this affection, or after it has entirely subsided. If used before this period, as is but too frequently the case, they aggravate the complaint, and render it sometimes very unmanageable; therefore, the period at which they can be employed with advantage is that stated above. The nutgall has long held the first rank in the list of the vegetable astringents; and the following formula is justly entitled to much praise for its convenience and efficacy:—

℞. Gallæ Alep. subtil. pulv. ℈j.
Cerate Simp. - ʒj. M. adde.
Ess. Lemon, - - gut. xx. vel. xxx.
Acet. Litharg. - gut. xl.
Tinct. Thebaic, - gut. xl. M.

A little of this ointment is to be rubbed upon the parts, morning and evening. Should it excite much smarting, it must be reduced by incorporating a little more of the cerate with it.

At the stage of the disease now spoken of, much benefit has occasionally been found from dusting the parts with the flour of sulphur. Another substance has gained, in a certain district of this state, the title of a specific in this complaint, at the stage we are now considering; namely, the brown powder contained in the fungus, commonly called the "Puff Ball," when dry; the dust of which is to be incorporated with hog's lard, and used in the same manner as the gall ointment.

CHAPTER XII.

OF PALPITATION OF THE HEART.

This is not an unfrequent attendant upon pregnancy; especially before the period of quickening. After this time, it often ceases, and does not return until towards the latter part of the term of gestation.

This complaint may arise from very different causes: and it is important that their effects be not confounded, as they require sometimes very opposite remedies for their relief.[1]

It may proceed from mere nervous irritability, and may be looked upon but as a symptom of hysteria; to which some delicate women are particularly liable during gestation; or it may arise from fulness of blood, joined to a nervous temperament, or from fulness alone.

In the first case, the palpitation will be attended by other symptoms which mark the nervous temperament, such as globus hystericus; large discharges of limpid urine; coldness on the top of the head, &c.; and these may not be accompanied by any extraordinary fulness of the circulating system.

Should it not, we may administer, with immediate advantage, almost any of the remedies in familiar use for such affections; as the asafœtida, Hoffman's anodyne liquor, orange flower water, hartshorn spirit, &c. It is, however, best, in all such cases, to inquire into the state of the digestive organs, and ascertain if there be not some derangement there, which may give rise to it —such as acidity or indigestion.

The first may be detected by a sense of burning at the pit of the stomach, sour eructations, or belchings tasting like unsound eggs. If this be the case, the regimen must be regulated, by forbidding such substances as will readily turn sour upon the stomach; as tea, coffee, vegetable substances, fruit, porter, wine, &c., and confining the patient to simple water as a drink; and animal substances for food; giving at the same time small doses of magnesia mixed in milk, several times a day, if the bowels be confined; if not, the extra soda water, lime water and milk, aq. ammon. puræ, &c. If from indigestion, which is a frequent cause, by avoiding such substances as are known not to sit well upon the stomach; by a dose of rhubarb and magnesia to carry off the

[1] We do not mean to extend our views in this place to the forms of palpitations of the heart which arise from organic causes; but merely to such occurrences of it as may, with strict propriety, be called sympathetic.

offensive material, and confining the patient for the next twenty hours to chicken water or beef tea.

If, with these symptoms, the pulse be accelerated, or full, and tense, and especially if there be a throbbing at the temples, blood should be abstracted, to an amount sufficient to restore the natural force of the arterial system. When this is accomplished, the "nervous medicines" just enumerated, may be given with advantage, if the bleeding has not relieved the palpitation.

Where this complaint is habitual at these periods, and particularly when it observes a pretty regular movement, much advantage is found from taking a small tea-spoonful of the Liq. Anod. Hoffm., about half an hour before it comes on.[1] If the period of attack be in the evening about bed-time, this remedy should not be neglected, as it will almost certainly relieve the sensation and procure sleep.

If this complaint come on at any period of the day, or is provoked at any time by slight causes, we have found much advantage from a pretty steady use of the following tinctures:—

℞. Tinct. Valerian. vol.
—— Castor } āā ℥j. M.

Of this, a tea-spoonful in sweetened water may be taken three or four times a day; or whenever the palpitation is troublesome. In the second place, if palpitation be unaccompanied by nervous sensations; if there be headach; flushed face; giddiness of the head; and if these be increased upon rising up; if a sense of fulness in the head, with a feeling of oppression about the chest; and if sleep be disturbed by unpleasant dreams, we shall find, almost always, that the arterial system is too much loaded; the pulse will be found tense, full, or creeping; irregular, and sluggish;

[1] We feel it a duty to express our indignation at the almost constant substitution of diluted vitriolic ether for the valuable article called Hoffman's Anodyne Liquor. This imposition upon the public has mainly arisen from three causes: 1st. On the part of the manufacturer, who wishes to make as much profit as possible out of an article in very common use, the purity of which, but too few medical practitioners know how to ascertain. In the genuine liquor, there is an indispensable ingredient, called "the oil of wine," of which the spurious does not contain a drop. The oil of wine is easily detected, by mixing a few drops of the liquor with water, and if the oil be present, the water becomes instantly milky, as the oil is insoluble in water. We would recommend this test to the medical practitioner; and if the milky appearance does not take place, let him reject the article. 2dly, To Mr. Brande having lately declared, that in effect, there was no difference between the spurious and the genuine liquor; than which there cannot well be a greater error. The first has all the properties of diluted ether—stimulating and heating: whereas the other is soothing and tranquillizing beyond any other substance, in certain cases, with which we are acquainted. 3dly, To the parsimonious conduct of the purchaser himself; of whom the manufacturer complains that he will not give the price for the genuine article: the last is reprehensibly sordid, if not palpably dishonest.

which nothing will relieve, but the loss of blood, gentle purging, and an abstemious diet.

Should stimulating remedies be given, as is too common, under the persuasion that weakness is the cause; or that all nervous affections are to be treated by stimuli, much mischief may ensue; such as intense headache, fever, and sometimes, even convulsions.

Mr. Burns says, that "Roderic à Castro prescribes a draught of hot water." This remedy, we have learnt, is sometimes very efficacious; it must be, however, only when the stomach is in some manner or other the cause of the affection. When this complaint is accompanied by nausea or vomitings, the hot water may be serviceable, as it is very successful in allaying gastric irritation.

CHAPTER XIII.

OF THE DISPLACEMENTS OF THE UTERUS.

UNDER this head, we might very properly place every deviation from the natural position of this organ. But to do this agreeably to the exact meaning of the words "natural position," would require an extreme degree of minuteness of description, as well as a most useless division of the different portions of the vagina. We shall, therefore, not consider any deviation of position of this organ, as coming within the meaning of "displacement," that is not attended with more or less inconvenience to the patient. I shall, however, confine myself, in the present work, to the "prolapsus uteri," and the chronic inversion of this organ; having treated of the several other displacements pretty fully in my "System of Midwifery."

SECT. I.—*On Prolapsus of the Uterus.*

Notwithstanding the uterus has four ligaments, purporting to support and sustain it in situ, yet they so ill perform this office, as to render it very doubtful whether such was the express intention of nature in their formation—certain it is, the uterus is subject to the impulses of the abdominal viscera; to the pressure of the distended bladder; and to the influence of the loaded rectum and sigmoid flexion of the colon, and we might add, to the influence of its own internal weight after conception. Besides, many other causes may tend to produce this displacement; as falls, blows, delivery, fluor albus, severe coughs, &c.

Gardien[1] makes three degrees of prolapsus; namely, 1st, relaxation of the uterus; 2d, descent, or falling of the uterus; 3d, the precipitation of the uterus. These distinctions are not entirely useless in practice; for though they are only different degrees of the same affection, they yet require a little difference in the mode of treatment.

"In the first degree, the inconveniences arise from the increase of size of the uterus; and are confined to a disagreeable dragging towards the groin and the umbilicus. In the second degree, the woman complains of a sensation of weight about the fundament, and a dragging about the groin, back, and umbilicus, which are more severe than in the first degree, and are augmented when the woman is on her feet and walks. If a horizontal position be observed for some time, it always affords relief; and the woman every morning would think herself cured, did she not know, from experience, all those symptoms would return after exercise or standing. In the third degree, the uterus becomes engaged more or less in the os externum, and sometimes even escapes from the vulva.

"In this case, it draws the vagina with it, which turns upon itself." "In this last degree, all the symptoms just enumerated are increased; the woman feels a nisus, or bearing down effort at the anus and neck of the bladder, in consequence of the uterus being engaged in the external parts, thereby compressing the rectum and bladder. But if the uterus escape through the external parts the symptoms last mentioned are less severe, or are found to moderate, when this takes place; but the pain in the back, and the dragging about the groin, increase, in consequence of the fundus of the uterus being still lower," p. 179.

Of the many casualties to which the uterus is liable, the prolapsus may be considered as the most frequent, as well as the most troublesome, though not the most dangerous. This displacement may take place at almost any period of life; for we have witnessed it in the aged matron, and have prescribed for it in the youthful virgin.

Dr. Campbell (Introd. to the Study of Mid.) p. 445, says, "No age, however, is exempt; for the author once encountered complete protrusion in a female of twenty-one, who, it was said, laboured under it for more than two years."

Capurin tells us of a case of prolapsus, in a girl of fourteen. To this I can bear witness, from my own experience; for one of the most severe cases of this kind I ever witnessed was in a girl of this age. These are important facts; and will lead to the detection (by a proper examination) of the cause of a variety of severe symptoms, the origin of which were from this cause, but

[1] Traité Comp. p. 179.

which would defy explanation, without the necessary explorations.

When we consider how imperfectly the ligaments attached to the uterus sustain it in situ; and when we reflect upon the frequency of debilitating discharges from the vagina, sapping as it were the very foundation of its support, we need neither be surprised at its often occurrence, nor at the obstinacy of this distressing complaint. Fluor albus may be looked upon as one of the most frequent causes of prolapsus: it relaxes the vagina, and makes it yield to the weight of the superincumbent uterus, or to the impulses of the abdominal viscera. I have already remarked, that neither the broad nor the round ligaments seem calculated to sustain the uterus in its natural position; and if this be so, we must look to some other part for the support of this organ—and this is the vagina itself. This office of the vagina may be deduced from the manner in which it is united to the uterus, and the mode in which that canal is joined to the rectum and bladder. The whole of this arrangement gives at once the idea, that the vagina is the efficient support of the uterus.—It then follows, that whatever is capable of weakening the foundation, will tend to injure the superstructure; hence, leucorrhœa, frequent deliveries;[1] too early rising after delivery; very large children; a very large pelvis; habitual coughs; severe pukings, and ill-conducted instrumental deliveries, may all tend to this end, by destroying the natural tone of this part, either by the debilitating effects of an immoderate discharge, or by the vagina being overstretched; thus preventing the return of its natural firmness and resiliency; or by the frequently repeated concussions this part may suffer, from the abdominal viscera, by coughing and vomiting.

The degree of precipitation to which the uterus may be liable, will depend on the extent of injury the vagina may have sustained, from the causes just enumerated: and will vary, from a slight depression, to an entire displacement: therefore, in some cases, it will be but barely within the os externum.

The symptoms which characterize this complaint will be modified by the greater or less descent of the uterus in the vagina—they will be intense in proportion (cæteris paribus,) to the extent of the displacement; but in all there will be a sense of some-

[1] It has been declared by Mr. Roberton, that "the great distention which the vagina endures in giving passage to the child's head for the first time is productive of more temporary injury to the canal, and the neighbouring textures, than happens in a subsequent delivery; and hence ensues a condition of parts favouring the descent of the uterus and bladder." We are of opinion there is some error in this statement, as it is a fact well known to every experienced practitioner, that these parts never recover their former condition with so much certainty as after a first labour.

thing sinking in the vagina, as if the perineum were sustaining an unusual weight; with a dragging sensation about the hips and loins; a desire to make water, sometimes without the ability to do so; or if it do pass, it is reluctantly, and oftentimes painfully hot—a sense of faintness, and occasionally a number of nervous or hysterical feelings and alarms, which almost overwhelm the patient. A pressure, and a feeling about the rectum resembling a slight tenesmus, sometimes importunately demand the patient's attention, which, if she obey, almost always ends in unavailing efforts. The pain in the back is sometimes extremely distressing while the patient is on her feet; and gives to her walk the appearance of weakness in her lower extremities. A benumbing sensation shoots down the thighs; especially when the woman first rises upon her feet; or when she changes this position for a horizontal one. In some few instances, the woman is obliged to throw her body very much in advance; or is obliged to support herself by placing her hands upon her thighs when she attempts to walk. But all these unpleasant symptoms subside almost immediately if she indulge in a recumbent posture, and this circumstance pretty strongly designates the disease.

In addition to the inconveniences we have just stated, there is always from the vagina more or less of a discharge of a purulent appearance; this, in severe cases, is frequently tinged with blood, and occasionally is offensive. In addition to this, we often find the menses suffer some derangement: they are almost always more abundant, and sometimes more frequent than they should be—this, with the accompanying leucorrhœa, very often reduces the woman's strength to a very low ebb; and, if not relieved, entails upon her permanent ill health.

In married women, this complaint, when excessive, is often detected by the pain that coition is almost sure to inflict; and this becomes oftentimes one of the most powerful inducements with the female to apply for relief.

Notwithstanding the diagnostics of a prolapsed uterus are so strongly and decidedly marked, yet they are not sufficiently so to warrant us in taking it for granted: we should never, but from a careful examination, pronounce this complaint to be positively present, lest we commit an error, as once happened to myself. I was consulted by a lady, who had long suffered almost every symptom recorded above; I pronounced her disease to be a prolapsus of the uterus; and without an examination per vaginam, had a pessary made for its support—but, to my sad mortification, when I was about to apply it, a careful examination proved that no such condition existed, and that all the unpleasant symptoms had arisen from a thickening of the neck of the bladder.

In No. II. page 157, of North Amer. Arch., we find the following denunciation of the pessary, as a cure or relief of prolapsus

uteri. "In such cases, all the usual contrivances, from the simple sponge, up to the most complex machinery, will be ineffectual, and cannot be borne by the patient. Any foreign body introduced into the vagina will give rise to an augmented mucous secretion, and occasion ulceration and offensive discharges. On this account, it will be difficult to induce the individual to persevere in the use of the instrument; the disease will continue to increase, and will finally assume a more formidable character. This will be especially the case, should the patient belong to the labouring classes. Such individuals cannot maintain the erect posture for any length of time without increasing the tendency of the organ to descend: as they cannot pursue their avocations while using the ordinary instruments, without suffering considerable pain, they are apt to lay them aside, and neglect their condition. The prolapsed parts will, therefore, become ulcerated, and indurated, and run into incurable disorganization; and finally, the constitution of the patient will be worn out and exhausted by fever and emaciation, and death will close the scene."

It will be naturally asked, what does Dr. F. himself propose for the cure of this common, and oftentimes serious evil? We will show what is his substitute in his own words, and let our readers draw their own conclusions of the merits of the two plans.

"All these difficulties may be obviated and the disease effectually cured by episioraphy, which is an operation instituted with the view of accomplishing an adhesion between the labia, and thus securing a natural barrier, by which the uterus and vagina will be prevented from prolapsing.

"The operation is exceedingly simple, and is performed in the following manner. *The patient is placed upon a table in the same way as for the operation of lithotomy, except that the hands and feet need not be tied. The operator seizes one labium between the thumb and fingers of his left hand, and, with a sharp-pointed bistoury, commences an incision about two fingers' breadth below the upper commissure, and one finger's breadth from the margin of the labium itself. This cut must be carried by a bold sweep of the knife to the fourchette, where it should terminate with a slight inclination inwards. In this manner a slip of the labium will be removed of the breadth of one finger. By a similar procedure, a portion of the other labium, of the same size, must be excised, taking care to unite the two incisions about a finger's breadth below the fourchette, at an acute angle, and include a portion of that frœnum. After securing the bleeding vessels, and arresting the oozing of blood from the spongy tissue, by sponging the part with cold water, the lips are to be brought together by suture in the common way.* Previously to doing

this, however, the operator should examine carefully the condition of the vagina and uterus, and if they require replacing, adjust them; and, to maintain them in their situation, introduce a piece of soft sponge, previously oiled, and transfixed by a ligature, to withdraw it when necessary. The sutures must then be drawn close, and the edges properly approximated as low as the fourchette, which will generally require from ten to twelve ligatures. The dressings should be simple, and secured by a T bandage. As it is desirable to obtain union by the first intention, and the contact of the urine might prevent it, it should be drawn off, for the first few days, by the catheter. *The aperture which is left above, will be sufficient to give vent to the menstrual discharge, and the mucus of the vagina, and may, even, the consummation of the venereal act. Should conception take place, it will be easy, by means of a small incision, to make room for the passage of the child!!*"

This horrible, severe, and ill-described operation, is seriously proposed by Dr. F. as a substitute for the simple, successful, and easily managed pessary.

We confess we were much startled by the reading of the above serious and wonderfully mischievous effects of the pessary—especially as we have applied many hundreds of these instruments within the last five and forty years; and in no one instance of this extensive experience, and, we will add, careful observation, have we, in a single instance, observed either of the mischievous consequences named by Dr. Frick. If we have witnessed such effects, it must have arisen from the bad structure of the instrument itself, and unskilful mode of applying it, or from the cases being of an improper kind for the use of the pessary, and not as a necessary consequence of this instrument, considered as a remedial agent for the relief of prolapsus uteri. Our experience has long since taught us, that a well constructed pessary, properly introduced, and the uterus and vagina free from inflammation, scirrhus, or any other morbid alteration of structure, is not only a safe, but a highly valuable remedy in this change of location of the uterus, and that, so far from causing the evils so formidably presented by Dr. F., that it has proved not only a complete remedy for prolapsus, but, in several cases, for leucorrhœa, that had resisted other remedies. For, in some instances, this deranged position of the uterus acts as an irritant to the mucous membrane of the vagina.

A pessary of proper construction is the only efficient remedy for this complaint—it should be as well fitted to the parts as the nature of things will permit; for much depends upon its proper adjustment. The one I prefer I have given a drawing of; it is to be considered but as a modification of the circular elastic gum pessary, or rather that of Levret. I made the alteration many

years ago, and I have every reason to be satisfied with it It is formed of silver, strongly gilt; it is hollow, and pierced with a central hole of only sufficient size to permit the escape of the discharges incident to the parts. There are three different sizes, one larger than the one of which a drawing is given, and one smaller —the medium size is most frequently required. The difference in size is only one eighth of an inch; either in addition or in reduction. See plate XII.

At the suggestion of Dr. Hopkinson, pessaries of many sizes, have been made of glass, which have been found, upon several years' experience, to answer, perhaps, even better than the gilt, 1st. They are very much cheaper; 2dly. They are never acted upon by the secretions of the vagina; 3dly. They are much more easily procured. The only objection I have found to the glass pessary, is its extreme smoothness—this, however, is easily obviated, by exposing it to the action of the vapour of the fluoric acid as prepared by Dr. Goddard.

When this is to be placed, care should be taken that the bowels of the patient shall have been freely opened, and the urine passed; and also, that she should have kept her bed for an hour or two previously to the operation. She must be placed perfectly horizontally on the bed, and near its edge—the parts lubricated, as well as the instrument, with hog's lard; the labia must be separated by a couple of fingers; one placed on each labium,[1] and the pessary then pressed gently, but firmly, against the os externum, directing the force downwards towards the internal surface of the perineum, and backwards in the direction of the vagina; but in such a manner as shall make the introduced edge look towards one of the sacro-iliac junctions.[2] We continue to press the instrument forwards in the course just pointed out until the whole of it is received into the vagina. Then the finger must give it a transverse direction; or, in other words, the breadth of the pessary must correspond with the small diameter of the inferior strait: this is easily effected; and we can judge whether it be well placed by feeling for the hole in its centre, which must always correspond with the axis of the vagina.

The next consideration is to ascertain whether the neck of the uterus is placed in the excavation of the instrument; (for it must be remembered it should be introduced so that its hollow face shall look upwards.) This may be known by passing the finger over the edge which is under the symphysis pubis and depressing it a little; the finger will then readily detect the position of the neck of the uterus; and should it not be found in the centre

[1] It is generally best to use the left hand for this purpose. See note following.

[2] It will generally be found most convenient for the operator to have the right side of his patient next to him; as, in this position, he will command the introduction of the pessary with his right hand.

of the pessary, it can readily be drawn there by the extremity of the finger. When this is adjusted, we take care that the transverse position of the instrument be exact, before we withdraw the finger: the woman may now be permitted to get up.[1]

The proper size of the instrument is a matter of considerable consequence; and we cannot always determine, à priori, which of the sizes will answer best—if it be too large, it will give pain; and if too small, it will escape, perhaps, on the first effort to go to stool. We can ascertain when too large, by its producing much uneasiness in the parts, and by the difficulty of introducing it: should this happen, it must be removed, and one of a smaller size introduced. And for fear the instrument be too small, we should direct the patient not to go to the privy, for a day or two, lest it escape from her and be lost.

The relief afforded by the introduction of the pessary, in many instances, is immediate; but, if not, it is almost always secured, in a short time, if the instrument be of a proper size, and well adjusted. It may be proper to remark, that the pessary will do no good where the perineum has been destroyed by laceration.

Before I employ the pessary, I almost always, if there be much leucorrhœa, but not otherwise, and when the time can be commanded, make use of astringent injections for two or three weeks, with very decided advantage—the best, perhaps, is a solution of alum in the proportion of a half ounce to a pint of water; and after the instrument is adjusted, a few syringes full of fine soap and water should be thrown up the vagina daily—if the gilt pessary be employed, it will need removal but very rarely; not oftener than once in two or perhaps three months;[2] this gives a very decided advantage over every other. The period it must be worn must necessarily depend upon, 1st. The inveteracy of the disease; 2d. The extent of the displacement; 3d. The employment of the patient; 4th. The greater or less disposition to fluor albus. As a general rule with young women, where the complaint has not been of long standing, from three to four months will sometimes be sufficient—it will, of course, require a longer time where the woman is more aged, and where the complaint is of long standing—one of my patients wore the in-

[1] In some instances we have found it best to confine the patient to a horizontal position for three or four days, with the intention of giving the pessary an opportunity of bedding itself in the vagina. This is particularly necessary where there is much sensibility in the parts, or where the instrument causes a little uneasiness after its introduction, though it fits the passage well.

[2] Indeed, it is not always necessary to remove it so often: we have had many patients who have worn the gilt pessary for six months, and sometimes even longer, without having it removed. This is fortunate for the patient, as it spares much moral pain. And the glass one can be worn even longer, without any disadvantage.

strument a year; but this was the longest time I have known it to be required.[1]

Besides the inconveniences just related, this condition of the uterus gives rise to a fixed pain in one of the sides, but especially the left, which bids defiance to all general as well as local applications hitherto employed for its removal.

Larrey, the celebrated French surgeon, proposes a very different pathology of this complaint as well as mode of treatment. He says, it is owing to two causes, either an asthenic (debilitated) thickening of the uterine parietes, or an elongation of the ligaments, and proposes for its cure that the loins, groin, and other adjacent parts, should be cupped. After this, he applies a moxa to each cupped spot, and this may be safely repeated; this to be aided by a horizontal posture, elevation of the pelvis, and flexion of the lower extremities; cold astringent applications and injections, lavements, and a mild, nutritious diet. He affirms he has made permanent cures in this way.

In the complaint now alluded to, and which we shall exemplify by cases, no suspicion was entertained by the practitioners, who previously had had the care of them, that it depended upon the prolapsed condition of the womb; and it is but a few years since I was myself aware of it. But, as this complaint is more common than is generally suspected, and as it cannot be removed, so far as I know, but by the use of the pessary; and, especially, as I have, since the publication of the cases about to follow, received various communications and thanks for their promulgation, I have thought it proper to detail them in this place, that the attention of practitioners might be directed to its consideration.

Case I. Mrs. T., aged thirty-six years, applied for my advice, for a severe pain in the left side, immediately under the margin of the false ribs, extending to the spine of the ileum of the same side. She informed me she had had this for several years, with more or less severity, and for which she had undergone severe medical treatment, such as bleeding, purging, blistering, leeching, &c., without the slightest benefit. The pain was not increased by respiration, pressure, or motion, but some relief was constantly experienced upon lying down, and especially as the night advanced. She could lie in any position without any increase of inconvenience, but felt most comfortable in a bent posture.

I prescribed for her a variety of medicines, with no better suc-

[1] Since writing the above, I have found several patients extremely reluctant to part with the pessary after there was every reason to believe it might have been removed without any inconvenience following. Two others have had the pessary restored, declaring they felt so much more secure with it—but none have complained of pain, after the few first days, however long retained. In two or three other instances; they have been removed at the seventh month of pregnancy, being no longer of any use as a support to the uterus. These cases show that impregnation takes place, notwithstanding the presence of the pessary.

cess than those who had preceded me; and began seriously to despair of being in any way useful to her, when, thinking the leucorrhœa, with which she was severely afflicted, might have some agency in weakening her, and believing this, from the description of her feelings, to arise from a prolapsed uterus, I mentioned my suspicions to her, and stated the propriety of an examination to ascertain the fact. To this she submitted; and the uterus was found low in the vagina.

I ordered her astringent injections, which were persevered in for three weeks, with as much advantage as I had contemplated —for the only benefit I expected from them was to give a temporary tone to the vagina before I should introduce a pessary.

At the end of three weeks, I introduced a gilt pessary, and desired my patient to place herself upon her feet—this she did, and declared she felt much more comfortable than she was wont to do when she arose from her bed; and observed, that for the first time for several years, she was free from the pain in her side. Believing this to be accidental, I paid but little attention to the declaration at the moment—but upon my visiting her the next day, she assured me she had no return of it whatever, nor has she had to this moment.

This case made a strong impression upon me; especially as I could call to mind several similar instances of affections of the side, in which I had failed to give relief; and it made me determine, should another case of painful side occur, to inquire immediately into the state of the uterus. It was not long before this opportunity presented itself in a lady from the West Indies.

Case II. Mrs. D. had, for several years, (five,) been much afflicted by a train of severe nervous affections—she would, frequently, from the slightest causes, be thrown into violent hysterical paroxysms, which required considerable time to calm. She had a fixed pain in the left side, which would occasionally appear to swell, and become extremely painful to the touch—when this took place, she was almost certain that hysteria would follow. Her appetite was good, but her stomach could only digest certain articles—her bowels were constipated, and she had a profuse leucorrhœa of a purulent appearance. She was considerably reduced in flesh, and much debilitated.

She had tried a variety of remedies in the West Indies for the local affection of the side—she had been repeatedly bled and blistered, without the smallest advantage—took mercury to a considerable extent—was freely purged and puked—but to no purpose. When the pain was unusually severe, it was considered as spasm of the stomach. From the detail of her symptoms, I was led, however, to suspect a prolapsus of the uterus, and inquired whether that opinion had been given by her physicians at home—but she said it never had been suggested; it was consi-

dered as an affection of the stomach altogether, and all remedies were addressed to it, either directly or indirectly.

I proposed an examination per vaginam, to which she very reluctantly consented—but that examination confirmed my first suspicion of her case. I ordered her the tincture of cantharides, and some astringent injections—also, small but daily doses of rhubarb; and continued this plan for nearly three weeks. At the end of this time I placed the pessary. She was almost instantly relieved from the usual symptoms attending a prolapsed uterus, and also the afflicting pain in her side.

Experiencing such immediate relief, and the almost total exemption from her nervous feelings, she became careless, and allowed her bowels to become, as they were wont to do, excessively costive; and in an effort to relieve herself, she discharged the pessary. This accident she concealed from her friends, until a recurrence of all her former inconveniences and pain, forced her to a confession. I was immediately sent for, and the loss of the pessary was made known to me. I placed another, and she again was restored to comfort: and now is in the most perfect health. She is no longer troubled with hysteria—palpitation of the heart—or any of her former nervous sensations. She can eat without selection, and her bowels are perfectly regular; and we may now add, that she has borne two children since.

Case III. I was requested to visit Mrs. P., who was represented to be suffering very much from an habitual colic. Not being well, my friend, Dr. Knight, kindly visited her for me, and prescribed a dose of laudanum, &c., which procured her a tolerably good night's rest. I saw her the next morning, and found her labouring under the distressing after-effects of the laudanum, but comparatively easy. She gave the following history of her complaint. She was attacked about twelve years before with a pain in her left side, which was occasionally so severe as to produce hysteria, and other disagreeable nervous affections. The pain was not augmented by pressure, cough, or respiration. She would swell sometimes very suddenly, and when this happened the pain was increased. She was much incommoded by exercise, or much standing, and if either were continued too long, it would occasion faintness, and a great deal of pain. When this took place, she would be obliged to go to bed, take laudanum, and be unable to rise for several days. She had leucorrhœa to a great extent—was much debilitated—extremely pale—her appetite feeble—and her digestion bad.

She was much afflicted with headache, and pain in her back—also with a severe numbness down the thighs, after standing awhile upon her feet. She had tried a great many remedies for the period above stated, and she considered herself growing worse daily.

Suspecting a prolapsus of the uterus to be the cause of her complaints, I proposed to ascertain it, to which she readily consented. The uterus was found very low; the os uteri could be felt just within the labia. I procured a pessary, and introduced it immediately, without any previous preparation, as she was obliged to go to New York, her place of abode, the next day. She was instantly relieved by the pessary; and declared herself, in five minutes after its application, to be perfectly free from all pain and inconvenience, and is now in perfect health.

Case IV. Mrs. L., a very delicate woman, aged twenty-eight, after a premature labour, attended with a great expenditure of blood, was attacked with a severe cough, which seemed to threaten phthisis. She was, however, relieved of the cough, by a persevering use of remedies, and change of air; but there remained a fixed pain in the left side; a sense of bearing down in the pelvis, and a strong desire to make water, whenever she stood upon her feet. I was convinced she laboured under a prolapsus, and mentioned this opinion to her friends. She would not, however, submit to having it tested, but permitted an old nurse to prescribe leeching to her side, followed by blistering: as she experienced no advantage from these remedies, she was at length prevailed upon to allow an examination per vaginam.

I was accordingly requested to visit her again, and to make the proposed search—this proved the uterus prolapsed. After due preparation, as above suggested, I applied a pessary, and she was immediately relieved, and continues well to this moment.

These cases most satisfactorily prove that the consequences of a prolapsed uterus are sometimes more extensive and severe than have hitherto been suspected; and also teach us, under circumstances like those detailed above, to make the necessary inquiries into the condition of the uterus. I will not pretend to account for the pain in the left side when it occurs there, for it is not invariably the seat of this sympathetic affection, though certainly the most frequent: it has prevailed in four consecutive cases; but these should not by any means be considered as sufficient to establish a rule.[1]

Since the above cases were published, a number of similar ones have occurred, of greater or less severity, all of which have been relieved by the same means. In one instance, a complete retention of urine attended; and so permanent was it, and so often repeated, that the husband was under the necessity of learning the mode of introducing the catheter, that he might give immediate assistance. The relief afforded by the pessary was instantaneous and effectual.

[1] I think it probable, that the seat of the painful affection of the left side is in the spleen; as this viscus is known to sympathize largely with the uterus.

The circular form of the pessary I employ I find answers perfectly well, as regards its mechanical properties; it does not press too violently upon the neck of the bladder, or rectum. All that is essential to be observed, is its size; it should be neither too large, nor too small. Many have preferred the oval pessary; thinking it allowed more room for the neck of the bladder, and for the occasional distention of the rectum. But as we have never witnessed any advantage to arise from this shape, as regards the objects just stated; and as the small ends of the oval instrument are more easily acted upon than the circular, and in consequence more easily displaced, we give, after many trials, the preference to the circular form. Gardien says, "Le pessaire de forme ronde est plus facile à placer: il est, en outre moins sujet à sortir," p. 183.

Gardien speaks of replacing the uterus in the first and second degree, by means of the finger introduced into the vagina, and pushing up this organ; and then confining the woman for some time to a horizontal position; and after all fear of inflammation has passed, to throw up cold astringent injections into the vagina; and lays some stress upon the efficacy of sulphur waters for this purpose.

Of this plan we can say nothing satisfactory from our own experience; it may succeed in certain recent cases, but must be totally inadequate to relieve a prolapsus of long standing. He objects to the use of pessaries, until every other means has been tried; and appears to entertain many apprehensions of the action of these instruments, which we are certain, from long experience, are ill-founded, provided they are properly constructed, judiciously used, and not employed when it is an "irritable womb" that is down. See art. "Of the Irritable Uterus."

In some cases, a subsequent pregnancy and delivery have cured a moderate prolapsus. We have, in a number of instances, recommended this mode of cure, and sometimes it has succeeded perfectly. To succeed by this plan, however, requires a long perseverance; to which patients, in general, will not submit, however strongly we may urge its importance. This method requires an almost exclusive confinement to a horizontal position after delivery, for six or eight weeks, (Gardien says four or five; but we have never seen so short a confinement succeed.) The woman must be careful how she passes her water, or voids per anum; that is, she must not strain or make strong efforts for these purposes.

Sect. II.—*Of the Chronic Inversion of the Uterus.*[1]

We shall, in the present work, confine ourselves to treating of the Chronic Inversion of the Uterus; or that condition in which it remains after its complete inversion, where it was impossible to restore it, and where the woman has escaped the dangers which the acute or immediate inversion threatened her. We omit here the antecedent condition, together with its mode of treatment, because it seems to belong exclusively to a system of midwifery.

The consequences resulting from the complete inversion of the uterus are by no means trifling, should the woman even escape with life. She will necessarily remain for a long time weak, not only from what she had suffered from pain, but also from the loss of blood which attended the acute stage of the inversion. She will be liable, for a long time, to a sanguineous discharge from the surface of the uterus, as well as to a leucorrhœal one from the vagina. In consequence of which she may become hectical, and die from exhaustion. Great care is required on the part of the woman, that she may not even suffer much, from the neglect of cleanliness.[2]

It will be seen, by referring to case second,[3] that the catamenial discharge may continue with perfect regularity for some time. It will then cease, most probably, from the influence of the external air upon the body and fundus of the inverted organ, by altering the arrangement of its secreting surface.

Astringent injections have been recommended, and they have been found useful; more, perhaps, from deterging the parts, than from any other influence. They should, however, always be employed; or at least injections of some kind should be regularly persevered in, so long as the discharge continues to be too abundant from the vagina.

One remarkable circumstance attends the inversion of the uterus, which is, that it disqualifies the woman for conception, at

[1] I have confined myself, in this place, as hinted before, to the chronic condition of the uterus after inversion; having, in my System of Midwifery, treated at large upon the acute or recent inversion.

[2] We were lately called in consultation to a recent case of "Inversion." The sufferings of the patient had been great, and the hemorrhagy exhausting. Upon examination, the inversion was found to be complete, and the flooding much abated, though the discharge was still considerable. Rest, nourishing diet, astringent injections, the extract of rhatany, &c., were prescribed with considerable advantage, for a time; but about every two or three weeks there would be a return of hemorrhagy, which would continue with more or less violence for several days. In this way, things went on for about five months, by which time the patient became so reduced, that it was resolved, in consultation, that the uterus should be removed by ligature, as the only chance for life—but the patient died before the operation could be performed.

[3] See System of Midwifery, p. 516.

least for a uterine one; if she be able to conceive at all. This, however, appears to be as it ought; and must be considered as an act of great beneficence on the part of the Creator: for, did the woman conceive, to what misery would she be doomed at its completion? I know of no instance, where impregnation has taken place after an inversion of the uterus.

Gardien observes, "Les femmes dont la matrice n'a pas été reduite dans les premiers temps sont probablement inhabiles à la conception: cependant, une observation communiquée au Professeur Baudelocque par M. Chevreul, médécin d'Angers, semblerait indiquer que la conception peut encore, s'opérer dans l'une des trompes dont les extremités uterines s'ouvrent dans le vagin."—Vol. iii. p. 312. This observation is so unsatisfactory, for want of detail, that it would not be safe to consider it, even as his opinion, that it was an instance of conception, after the inversion of the uterus. Besides, he has not indicated from whence he derived the case, that more light might be received on this point.[1]

A woman who has an unreduced uterus does not necessarily die suddenly, or even eventually, from this cause; since a few rare cases are upon record, where, after such an event, they have enjoyed for some time a tolerable share of health: this was the case with Mrs. P., in case second, before referred to; the only one which has occurred in my practice of an unrestored uterus after an inversion.[2] I have seen altogether but eight cases; three of which were fatal; two, to this moment remain inverted; and the three others were reduced pretty soon after the accident.

The fatal termination of this disease, in a vast majority of cases, seems, however, to be rather the result of improper treatment, than the necessary consequence of the accident itself. From what we have seen of this complaint, we are certain that much is in the power of a well instructed practitioner, to prevent a fatal, or even a hazardous termination: for the disease, we repeat, is by no means necessarily fatal.[3]

Experience sufficiently proves, that in by far the greater num-

[1] It is much to be regretted, that we have not a more satisfactory account of this case, than the one given by Gardien; for if it be as is stated, it is of much physiological consequence; inasmuch as it settles, beyond dispute, that the direct conveyance of the semen through the os uteri is not the mode by which impregnation takes place. But I do not feel myself disposed to take advantage of a statement so general as the above certainly is, to enforce what I have so frequently urged against the doctrine of the direct conveyance of the semen, and thus indirectly strengthen speculation on the subject.

[2] Since the above was written, I have met with another instance of complete inversion, and which has now become chronic. See System of Midwifery, art. Inversion of the Uterus, p. 464.

[3] Ruysch, however, says, "If this accident be not immediately remedied, death presently follows." Obs. X.

ber of instances, the uterus may be restored, if the proper moment be seized, and the operation be properly conducted; for certain it is, that the complete inversion rarely takes place at once, unless it be from some improper manœuvre executed upon the placenta; a circumstance which cannot well happen in the hands of a judicious practitioner. Though we must admit that the inversion may happen in the hands of the best instructed, and most careful person, as he cannot foresee, nor always prevent that condition of the uterus which gives rise to it; yet the accident, and its fatal consequences, will be comparatively rare with him. And when it does occur in such hands, it will almost always be a manageable disease, as it will be discovered, before the fundus and body have entirely escaped through the os uteri, to constitute the complete inversion; in which case it will be rarely otherwise than reducible.

And when not reducible, though the inversion be not complete, as will occasionally happen, immediate death may perhaps be prevented, by making it complete. See System of Midwifery, p. 464, 3d edit.

When the inversion has not been, or cannot be reduced, the woman may die suddenly, or in a short time, from the profuseness of the discharge; or she may linger out a miserable existence for years. Sufferings, both severe and long-continued, await the woman who has an unreduced uterus; her life is that of misery and wretchedness: and these augment in proportion to her incapacity to support them. Under such circumstances, it is justifiable to attempt almost any thing which would promise relief. Hence, it has been proposed to remove the pendant uterus by excision or by ligature.

The extirpation of the uterus is not a novel proposition; it has been frequently performed, and with, perhaps, a fair proportion of success; at least as far as can be determined by the histories of cases purporting to be of this kind. For the inverted uterus, and a polypus of this organ, may readily be confounded, and the mistake, either way, may give rise to very different results.

The diagnostics of the inverted uterus, and a polypus of this organ, as laid down by writers, are both vague and discrepant. This has created no small embarrassment and uncertainty in the surgeon, who is about to undertake the removal of the tumour occupying the vagina; since he cannot satisfy himself of the real nature of the disease he has to contend with.

Mr. Newnham appears to have felt all this uncertainty in its fullest force, when he was about to apply the ligature upon the uterus, and he makes this uncertainty the basis of his essay upon "inversio uteri." To aid his judgment in this interesting and perplexing case, he laboriously consulted almost all the authori-

ties extant; and, after carefully collating their opinions, he reduces them to the following summary.

"It is generally remarked, that *inversio uteri* may be distinguished from polypus of that organ by the *os uteri not encircling the former tumour in cases of complete inversion: and by the impossibility of passing the finger around the neck of the tumour, between it and the os uteri, where the inversion has been only partial; by the form of the tumour, the polypus* being *broad at its base*, and attached by a *narrow peduncle, while the inverted uterus is broader above than below;*[1] by the *insensibility* of the tumour in the one case, and by its extreme sensibility in the other; by the *comparative fixity* of the one tumour, and the *extensive sphere of motion* of the other; by the *rough and fungous surface* of inversion, contrasted with the *smooth and polished* surface of polypus; and by the previous history of the patient's disease." "But it is clear, that these diagnostics are liable to a great degree of uncertainty," as he proves by most ample quotations.

Mr. Newnham has collected, as we have remarked, with great industry, nearly all that has been said upon the diagnostics of these two complaints; and, from all that can be learned from these various sources, a conclusion must be drawn, that there are none which are absolutely certain. Mr. N. says, "On reviewing the foregoing testimonies, we shall be induced to conclude, that it is *always difficult* and *sometimes impossible*, with our present knowledge, to distinguish *partial and chronic inversion of the uterus from polypus:* since, in both diseases, the os uteri will be found encircling the summit of the tumour, and, in either case, the finger may be readily passed around it. And if, in order to remove this uncertainty, the whole hand be introduced into the vagina, so as to allow the fingers to pass by the side of the tumour, to the extremity of the space remaining between it and the os uteri; and if we find that the finger *soon arrives* at this point, it will be impossible to ascertain whether it rests against a portion of the uterus, which has been inverted in the usual way, or by the *long-continued dragging of polypus upon its fundus.* And if, under these embarrassing circumstances, we call to our assistance our ideas concerning the *form of polypus*, its *enlarged base and narrow peduncle*, we must also recollect the abundant evidence to prove, that the neck of such a tumour is often

[1] We are a little surprised at this last distinction; for certain it is, we have never witnessed an instance "of the inverted uterus" being "broader above than below;" nor can we imagine how this can exist. We are every way sure, that the same relative proportions exist between the fundus and body, and that of the neck in both the natural and inverted conditions of this organ; consequently, the mark mentioned by Mr. N. cannot be present, but by some unusual arrangement; and, of course, must not be considered as a diagnostic.

as large, and sometimes larger, than its inferior extremity; and we shall still be left in an inexplicable difficulty," p. 82.

"But shall we not find some more infallible guide in those other characteristics which have been given as certain diagnostics?

"On the contrary, we shall always find it difficult to distinguish between the sensibility of the tumour, and *sensation* occurring in neighbouring viscera, which are irritated by the process of examination,—while, too, it must be remembered, that the sensibility of the inverted uterus is greatly diminished in its chronic stage, and that the sensibility of polypus may be increased by the presence of inflammatory action; we shall ascertain that the degree of apparent fixedness of the tumour will depend upon the extent of its attachment to the uterus,—consequently, the polypus, with a considerable stem, will be fully equal, if not greater, than in the inversion of the uterus, the size of which has been diminished by time, and the action of the absorbents:—that in either case, and interchangeably, according to the different periods and circumstances of the disease, the surface of the tumour may be either smooth and polished, or present a rough and fungous feel; and that, with respect to the previous history of the case, it is embarrassed by the fact that polypi have been produced *in the uterus*, and have only first passed into the vagina, immediately after the expulsion of the fœtus, or of the placenta. In the case of recent inversion, the combination of some of these diagnostics may enable us to decide with accuracy on the nature of the case; but they are insufficient to guide our judgment, when we are first called to give our opinion on the disease in its chronic stage," p. 83.

The case which gave rise to the above conclusions proved to be an inverted uterus; it was successfully removed by the ligature; and the woman was restored by the operation to perfect health, and without the loss of those feelings which it is thought have their origin in the ovaria; it was therefore presumed, that these bodies were not removed with the uterus; neither did they appear to be attached to the removed portion of the uterus.

The mode of applying the ligature is not described by Mr. N.; but we presume it is precisely the same as that recommended by Mr. Clarke for the removal of a polypus. See Chapter on Polypus.

CHAPTER XIV.

OF THE DISEASES OF THE UTERUS, OVARIA, AND TUBES.

THE whole of the internal organs of generation are liable to diseases, the most of which may be considered as incurable. To describe minutely the whole that are known would, of itself, require a volume; and, if this were done, we might be disposed, in many instances, to inquire for the cui bono, as regards the success of medical treatment.

Such of the diseases of this system as consist in sensible alterations of structure, may be considered as arising from inflammation of one or more of the tissues composing these organs; or from the formation of tumours which have originated in inflammation, either acute or chronic, the existence of which was not betrayed by any cognizable symptom in its incipient state; or into such as may have had that peculiar beginning, which, by the application of sufficiently powerful exciting causes, may give rise to malignant developments that may prove destructive to the different surrounding structures.

SECT. I.—*Of the Disorders and Diseases of the Uterus.*

The affections of the uterus may be classed under the following general heads; and were we disposed to enumerate every departure from a healthy condition we might make very many subdivisions, without adding to either perspicuity or to usefulness:—

1. Imperfections in structure.
2. Variations and changes of structure.
3. Diseases of its external and internal surfaces.
4. Diseases of its neck.

1st. Under this head we may reckon,
- *a.* When this organ is larger, or smaller, than natural.
- *b.* Where the neck is altogether wanting.

2d. Under this head may be comprised,
- *a.* Extreme smallness of this organ.
- *b.* Where this organ is double, or is divided into two compartments.
- *c.* Where this body is cartilaginous, or scirrhous.

3d. Under this head may be classed,
- *a.* Tumours of various kinds.
- *b.* Abscesses.

c. Ulcerations.
d. Cancer.
e. Tubercular, spongy, or polypous excrescences.
f. Hydatids.
g. Cauliflower excrescences.

4th. Under this head may be included,
a. Cartilaginous rings of the os uteri.
b. Its complete occlusion, from
1. Excrescences filling it up.
2. Stones obstructing it.
3. Membranes forming within it, and from membranes passing over it.
4. Scirrhous tumours.

Sect. II.—*Of the Diseases of the Ovaries.*

These bodies are more frequently diseased or disordered than the uterus itself; but neither the diseases, nor disorders to which they are liable, are of such dangerous consequence. They are, however, for the most part, more occult than the other diseases of the genital system, if we except those of the tubes. Hitherto no remedy has been discovered, that has a decided operation on these bodies; consequently, they are very little under the control of remedies whose operations are felt upon the general system, or of those which may exert an influence on certain portions of it. It is probable, that during an active state of disease, as inflammation, the usual remedies for fever or inflammation, may be availing, as bleeding, purging, low diet, blistering, &c.; but here, perhaps, the power of the materia medica ceases: for no one instance, with which we are acquainted, would lead us to the conclusion, that any remedy has removed a disordered condition of these parts.

They seem to be removed so far from the general sympathies of the system; so insulated in position; so independent in function; that the common agents for the removal or control of disease, seem to waste themselves in unavailing attempts to influence their actions, or to modify their affections. Who flatters himself that he has removed a dropsy; resolved a scirrhus; or interrupted a suppuration in these bodies? We believe, if he be candid, none will declare he has. Little more then is ascertained, at present, than that these parts are very liable to disease, and but very little susceptible of cure. But, must we so humble the powers of the healing art, as to declare we never shall be master of these diseases? Certainly not. Advances are constantly making towards the improvement of this branch of science, though its perfection must necessarily be remote; still, from time

to time, we become acquainted with substances, which have a specific action upon certain tissues of the human body. The time may arrive, when we will be in possession of a substance, the action of which shall be confined to the ovaries alone, or to similar organizations, if any such there be, in other portions of the system. But until then, unfortunately, the victims to affections of these important parts must remain contented with the solace which palliatives afford.

The affections of these organs may be classed as follows:

1. Scirrhous, or other derangements of organic structure.
2. The entire absence of the organ or organs; if a negative may be assumed for a positive condition.
3. Contracted, dry, shrivelled.
4. Enormous distention of them; from pus, water, fat, &c.
5. Containing extraneous substances; as hair, bones, teeth, &c.

These conditions of the ovaries are far from being very rare; Morgagni alone, from his own observations, furnishes a number of instances of them; many others, who have been attentive to morbid anatomy, have done the same. For, unfortunately, they have much more frequently furnished subjects for the anatomist's knife, than triumphs of the physician's skill.

Dr. Robert Lee relates the following cases, and shows to what extent the distention may go, and the mischief it may create. "In a case," says he, "under my own observation, (in the infirmary of Marylebone,) an ovarian cyst became impacted between the bladder and rectum, producing all the symptoms of a stricture of the rectum. In a lady now under our care, the presence of an ovarium or uterine tumour in the pelvis, which presses upon the neck of the bladder, renders it impossible for the bladder to be emptied without the introduction of the catheter." Cyclop. of Pract. Med. Art. Ovaria, p. 229.

Sect. III.—*Of the Diseases of the Tubes.*

The alterations in structure, which these bodies undergo, are different from those to which the ovaria may be liable. There is rarely any other change in these bodies than that which inflammation produces,[1] and they chiefly consist,

1. In the obliteration of their canals; or of one of them.
2. In adhesions with the ovaria, by means of their fimbriated extremities.
3. Sometimes, in a great distention of one of them, from the partial development of an ovum.

[1] They are, however, said sometimes to be involved, as also the ovaria, in cancer of the uterus.

The diseases of the tubes, like those of the ovaries, seem to be but little known at the moment at which we might anticipate success from treatment, namely, during the active stage of the complaint. That these bodies are much more frequently inflamed than is generally imagined, we should infer from the number of instances of derangement of structure which dissection brings to light. Yet we are of opinion, that few practitioners have ever admitted to themselves that they were directing their remedial views to an inflammation of one or both of these bodies. We have every thing yet to learn, as regards the diagnostics of the diseased tubes; for to this moment we are altogether unacquainted with the portions of the body with which they sympathize, or what parts they call into sympathy. We have, in a number of instances, prescribed for a deep-seated pain in the situation we might suppose the tube to be; that is, a little to the right or to the left of the symphysis pubis, but posteriorly. If the part be pressed upon pretty firmly, some pain will be felt; and upon turning suddenly in bed, will be sometimes severely acute. There is constantly present, an aching, obtuse pain, and every now and then a lancinating one. There is a frequent desire to pass water; and the water is scantily secreted: after passing it, a pain is felt at the neck of the bladder; the urine is high-coloured, and of a strong alkaline smell. The stomach is occasionally sick, and easily provoked to vomit, if offended by medicine or food. The patient is easier on her back than side; but altogether unable to sit up without great agony. Efforts to vomit are attended by severe pain; and going to stool is also attended by like inconvenience. The heat of the skin of the arms and hands, is below the natural standard; but other portions of the body are hotter than natural. The tongue furred; and a constant disagreeable taste in the mouth. The pulse rather quick, tense, and wiry. No disposition to moisture, though occasionally, without knowing why, a profuse perspiration breaks out, but without tarrying long or affording relief.

The pain is sure to be aggravated at night; so much so, sometimes, as to prevent the patient from sleeping, unless under the influence of strong doses of opium; and these are not always found successful in destroying the severity of suffering.

I have witnessed this pain on both sides of the pelvis at the same time; but more frequently only on one. In all the instances I have seen of this affection, there was an irregularity of the menses, and sometimes a total suppression of them. I have known the pain to continue from two weeks to three months, notwithstanding the most active plans were pursued; such as bleeding, leeching, cupping, blistering, purging, rubefacients, &c. In one instance of unusual severity and pertinacity, after the disease had lost its acute form, it was removed in a short time by the volatile

tincture of guaiacum. Before this remedy was employed, the complaint had abated much of its severity; though the patient suffered considerably at the time it was commenced.

I am, however, by no means certain, that the disease now described, was an inflamed tube or tubes; but think it probable. That it was a disease of some one of the female organs of generation, I am pretty firmly convinced, as I never met with a similar affection in the male.

CHAPTER XV.

OF THE PARTICULAR DISEASES OF THE UTERUS.

Under this head I shall consider only such affections as attack the substance of this organ; and shall confine myself at present to carcinoma, and a few other diseases of this part. The many complaints to which this organ is liable, and with which every practitioner should be familiar, renders it necessary to give a full consideration to some of them, while others, from their incurable nature, will require little more than their history; as the method of cure is unknown to us at present.

Thus, it would be proper to dwell upon all the derangements of menstruation, menorrhagia, leucorrhœa, prolapsus, retroversion, inversion, &c.; while a short account of the carcinoma, cauliflower excrescence, corroding ulcer, &c., will be sufficient, as we are unfortunately acquainted with little more than their ravages.

The diseases about to be considered are not very common in this country; at least, they would appear to be less frequent here than in Europe: nor is this, perhaps, of very difficult explanation. It seems to follow, as a natural consequence, that that part of the body which receives the most injury from mechanical or other violence, will be the most liable to disease; but whether these violences be capable of themselves of producing an original complaint, like carcinoma, &c., or only act as exciting causes upon certain predispositions, remains to be determined.

We are of opinion, that no part however injured will suffer cancer, unless that part is predisposed to it; as it requires, it seems to me, a certain condition of the part before it takes on the cancerous action, and that predisposition may lie dormant until such lesion or injury is done to it, as shall excite inflammation in it; and if the disposition to cancer be inflammation or ulcera-

tion, it will run on to one or other, if not checked by suitable means, and it will terminate in cancer; but not otherwise. The inflammation is sui generis, and must have its appropriate agent. Common inflammation may be successfully combated by common means; but not so the inflammation of cancer. Hence, we see inflammation of a gland or glandular part treated safely and happily, unless there be a disposition to cancer, but if that exist, the consequences are always to be dreaded. Hence, many cancers are attributed to a very slight degree of violence in the mamma, especially in a breast so disposed; but double the force or injury to the breast disposed to cancer, will prove, perhaps, fatal; thus we find scirrhus generally forerunning cancer, which latter tendency may lay dormant for many years, and perhaps always, if not called by accident into action. Therefore, the distinction of some of the French writers has no foundation, namely, "ulcer and ulcerated cancers;" the former intended to signify those cases where the ulceration is the primary affection, and the morbid disposition but secondary; whilst in the latter case, the scirrhus precedes the ulceration. I believe, in all cases of *genuine* cancer, a state of scirrhus precedes the ulceration, and never attacks any but glandular parts.

Dr. Churchill says, "It is indisputable that in other parts of the body, the ulceration may occasionally precede the cancerous disposition."—Churchill on the Principal Diseases of Females, p. 172.—Although this is said with great apparent sincerity, yet it forces no conviction on my mind. In this it is similar to scrofulus. It has been attributed to chronic inflammation by Broussais; by Copland and Andral, an altered nutrition, &c., all of which goes to prove that we know nothing about it.—Churchill, *ib.*—All parts of the uterus are liable to it, but some parts appear to be more so than others, as the neck of the uterus, and all the difference in phenomena is only owing to the seat, or degree of development of the morbid structure.

It is said, on the authority of Dr. Copland, that "the fluid from cancer slightly effervesces with sulphuric acid, and turns the syrup of violets green."—Pract. of Med. p. 285.

Nor will the development of its intimate structure or any chemical analysis serve to explain its origin. After all the glands are destroyed, the other vessels in the neighbourhood seem to take on a healthy action or inflammation as the surrounding parts will be agglutinated, which would not be the case, did the cancerous disposition obtain in all of them.

We believe these injuries, however, may be capable of doing both the one and the other; but the character of the diseases produced under these different circumstances, will be very different. Thus, tumours, or other indurations of the uterus, pass

too commonly under one common name, as scirrhi; but without scirrhus being the disease. While, on the other hand, when a predisposition to cancer exists, the true scirrhus, or carcinoma, may be formed by local injuries; or, if formed, they may make cancer declare itself.

Now, as it is a fact, sufficiently well established, that tedious, laborious, or impracticable labours are very much more common in Europe than in this country, it will necessarily follow, that the uterus of the European woman is, in the same proportion, exposed to injuries from this cause; consequently, if the predisposition be admitted to be equal to the women of both countries, the exciting cause will be more rarely applied in the one instance than the other; and hence, fewer instances of cancer uteri in the one case than in the other.

Sect. I.—*Of the Carcinoma Uteri.*

Our opportunities of seeing this disease, as well as that of the corroding ulcer of the uterus, have not been sufficiently ample, to make us rely altogether upon our own observations, for their history, appearances, or mode of treatment. We shall, therefore, mainly depend upon the descriptions given by Mr. Clarke, in his excellent work upon the diseases of females, as they entirely agree with our own experience.

Mr. Clarke observes, that cases of carcinoma uteri[1] are frequently met with in practice, but that very young women are seldom attacked; women of middle age are much more liable to it. It rarely commences with violence; but like carcinoma in other parts of the body, becomes, as it proceeds, more and more distressing.

It attacks at first only the neck of the uterus; and Mr. Clarke lays great stress upon this observation. For tumours of this organ elsewhere situated are of a different character; having different symptoms and terminations.[2] In the dead body, they have

[1] "By carcinoma uteri is meant that disease where there is a tumour near to, or a thickening of the cervix of the uterus, which tumour or thickening is disposed to ulcerate."—Diseases of Females, p. 207. Am. Ed.

[2] Dr. Mackintosh gives an account of a tumour of the uterus, and which he calls a "vascular sarcoma" of this organ, which, upon weighing after death, was found to amount to more than fifty pounds avoirdupois. He observes, "This is, perhaps, the most extreme instance upon record, particularly in which life was preserved so long under such circumstances, as the tumour not only filled the abdomen, but pushed the diaphragm so high, that it encroached upon the thorax, and lay over the heart and lungs, so as to conceal the respiratory sound over the whole anterior part of the chest." "On cutting into a uterus affected with vascular sarcoma, there is observed not only a resemblance to the natural structure, but an absence of those lines which characterize scirrhus."—Mackintosh's Practice of Physic, Vol. II., p. 314.

some resemblance to carcinoma, but they are never found ulcerated.

Carcinoma particularly affects glandular parts; hence, its attack of the neck of the uterus.

Tumours of a large size have frequently been called scirrhi, because they are hard in their texture: but the true carcinoma seldom become very large.[1]

A sense of weight is felt in the vagina; a discharge of mucus sometimes tinged with blood, or sometimes pure blood, after exercise, comes away, and this in sufficient quantity at times to weaken even to fainting. Menstruation, if it have not ceased, becomes irregular, and more abundant than ordinary.

Strangury almost always attends; the inner membrane of the bladder secretes a transparent mucus, which falls to the bottom of the urinal. Pain, like the passage of a calculus from the kidney to the bladder is felt, and urticaria, heartburn, &c., attend.

Care must be taken that these various affections of the stomach be not mistaken for the disease; as they are only symptomatic of the condition of the uterus—they augment as the disease advances, and much mischief would ensue, if they were treated as original diseases.

An examination per vaginam should always be requested. If the disease be carcinoma, the cervix of the uterus will be found thickened, and resisting like gristle; or a distinct tumour will be perceived on some part of the neck of the uterus; the other portions remaining healthy. In either case, pressure produces a lancinating pain.[2]

[1] Dr. Horner and myself attended a lady with carcinoma, complicated with a polypus nearly the size of a hen's egg, which masked in great measure the condition of the neck of the uterus until it was removed by ligature. After the removal of the polypus, the neck of the uterus was found to be ulcerated to a considerable extent; indeed, all round, with the exception of the spot to which the pedicle of the polypus was attached. The patient for some time remained very weak from the excess of discharges: they, however, diminished, and the ulceration of the neck of the uterus was reduced to a surface not exceeding the size of a ten cent piece; the discharge from the vagina was scarcely any, and of a healthy appearance; strength was rapidly returning;—in a word, every thing gave promise of a recovery. But unfortunately, the patient, a little careless when about to sit down, fell with considerable force upon her seat, which gave her great pain, —hemorrhage to some extent followed, by which she was very much reduced, and eventually died from exhaustion.

[2] It is now well ascertained, that there are many affections of the neck of the uterus that are not *carcinomatous*. We have seen a number of this kind; a kind that at first alarmed us much; but which, by a proper mode of treatment, yielded eventually, if not suddenly, to our remedies. The remedies which are proper to the treatment of incipient carcinoma, are precisely such as will prove beneficial in the various intumescences of the neck of the uterus—but especially, local bleeding, severe diet, and absolute rest. Leeching, immediately from the uterus, is incomparably better than more remote leeching; and notwithstanding the great aversion our American ladies have to this mode of depletion, we are happy to say, we have, in a number of instances, been able to overcome this reluctance, from

The os uteri will be found changed. It becomes larger, though it retains its shape—it will sometimes admit the extremity of the finger. Patients rarely die during the carcinomatous state of the disease; when they do, it is in consequence of frequent hemorrhagies.—Clarke on Female Diseases.

Sect. II.—*Of the Treatment of Carcinoma Uteri.*

It seems to be a doubtful point, by those best acquainted with this complaint, whether a cure, or mere suspension of the disease has ever been effected. Mr. Clarke, with all that caution which characterizes the honest practitioner, thinks he has cured this affection in its incipient state, though he dare not absolutely avow it. We feel ourselves precisely in the same predicament—we have had two cases very similar to those described by Mr. Clarke;[1] in both of which there was a restoration of the neck of the uterus to its natural size, with an entire cessation of all the previous distressing symptoms; these may not have been genuine cases of carcinoma, though we believe they were.

which they have derived the most prompt and satisfactory advantage. One lady, who had numerous tumours about the neck and pelvic portion of the body, was entirely relieved of them by persevering in the use of the ext. conii; she began with a grain three times a day, and gradually increased it until it amounted to *one ounce, and one ounce and a drachm* per day.

[1] Since this time, two other similar cases have presented themselves, both of which have been entirely relieved. One of these cases presents so much interest that I shall briefly relate it. Mrs. —— has suffered, for seven or eight years, constant pain in the pelvis, which at times becomes highly aggravated, especially during the menstrual period. This discharge is sparing, very dark-coloured, and irregular. There is some leucorrhœa, which is rather offensive, if the utmost care be not paid to cleanliness. The pain during the menstrual flow is extreme, and almost always attended by strong hysterical paroxysms; strength impaired, appetite feeble and whimsical; feet swollen, but not excessively; very pale, and eyelids tumid in the morning; pulse corded and irritated. The case has been treated as one of difficult menstruation; all remedies, so far, have rather tended to increase her sufferings. An examination, per vaginam, discovers the uterus enlarged, its neck much swollen, a number of small hard tumours placed up it, and as much of the body of this organ as can be felt in the vagina. The uterus precipitated so much as to rest upon the face of the perineum—the whole space left in the vagina will not exceed that of a small wine glass. The vaginal parietes dense, and unyielding—the whole of the parts that can be touched with the finger exceedingly painful, especially the neck of the uterus. Coition impracticable, or nearly so. The subject is young, that is, twenty-six years of age; has been married eight or nine years, but never has conceived.

Rest upon the bed almost absolute—regimen strictly antiphlogistic—leeches to thigh every three weeks—purge every other day with jalap and cream of tartar—live absque marito—warm water injections per vaginam three times a day.

This plan, with very trifling variations, was continued for thirteen months; the parts by this time were restored to their natural condition, as regards feeling and form. Suffers no inconvenience from matrimonial intercourse: catamenia regular, and sufficiently abundant. This improved condition has continued now for fourteen months without interruption—in a word, the patient considers herself perfectly restored to health.

Nor do we see any thing very irreconcilable in the case; for if proper means be duly employed, they will almost surely be attended with advantage, if without absolute success; and if the ulcerative process be prevented, or even retarded, which we are disposed to believe will often happen, very much is gained. Indeed, it is very well known that this disease is held long in subjection by the continuance of the menstrual discharge, and a temperate mode of living. And from this very circumstance a valuable practical hint may be taken, in the management of this disease.

The first object, in the treatment of carcinoma uteri, is to prevent ulceration from taking place; this is to be done by the reduction of the local inflammation, (which is essential to the disease,) by such means as are best calculated to diminish the quantity of circulating blood, and to abate arterial action.

These ends will be found best answered by

1st. Blood-letting, both general and local.
2d. By purging.
3d. By an abstemious diet.
4th. By cleanliness.
5th. By rest.

1. *Abstracting Blood.*

We believe that an increased pulse always attends this disease, when it declares itself by pain in the lower region of the uterus, and an increase of the vaginal discharge. If the arterial system be not found at such times absolutely preternaturally increased, it is sure to be most easily excited. On this account, the abstraction of a few ounces of blood becomes highly important from time to time; but if the catamenia have ceased, it becomes absolutely necessary. This may be taken from the arm, when considerable arterial excitement is present; and, so far as we have witnessed, it has been found with considerable buff, or even cupped.

If there be less excitement, and particularly if there be a severe throbbing pain just above the sacrum, much immediate relief is found from losing six or eight ounces of blood by either cupping or leeching. We have found it necessary to have this operation repeated, sometimes every three or four weeks.

We are generally directed to abstract blood from such patients as may be plethoric; this is certainly a proper direction, so far as it goes—but no farther; for it seems to forbid this operation, when this state of fulness is not manifestly present: now, were this operation to be withheld for the want of this evidence, we should very often deprive the patient of the best means of relief,

though that relief may be but temporary. We have constantly found, when pain was severe, the pulse frequent and tense, or wiry; (for so it will almost always be found in these cases,) the skin hot, and sleep uncertain, that the abstraction of a few ounces of blood would afford not only considerable relief, but would place the system in a better condition for narcotics, so indispensable in such cases.

Besides, it seems to lessen the hemorrhagic tendency of the uterus; and thus abates the discharge of blood, which might otherwise be too abundant. We generally prefer local bleeding, when it can conveniently be had recourse to; as its effects are more decided, and diminishes the strength less. But we have no experience ourselves to authorize us to decide whether it will be best abstracted from the back or abdomen.[1] Mr. Clarke says, "The relief produced by topical blood-letting is great, and often immediately felt: blood is generally procured more easily, when the cupping-glasses are applied to the back, than when they are placed upon the abdomen. Nevertheless, when blood can be procured in sufficient quantity from the lower part of the abdomen, it will be proper to direct that it should be so taken, especially when cupping on the back has failed to produce the expected advantage," p. 266, Vol. I. Leeches, applied to the vulva, have had, we think, a more prompt effect than when applied to the back; and we are informed by Guilbert and Duparcque, that when applied *early* to the neck of the uterus itself, that leeching is still more useful: this assurance not only applies to the early stages of the disease under consideration, but in an especial manner to the chronic phlegmasiæ of the uterus, when attended with an engorged condition of its neck. The efficacy can be easily believed; but, to get our fair countrywomen to submit to these applications, I fear will be a work of no small difficulty—yet it should be overcome, as it may save them from the most loathsome and painful of all the diseases to which the sex is liable. We therefore hope, in due time, to see the prejudices which now interdict the application of leeches immediately to the neck of the womb, done away, as the health and happiness of thousands will depend upon their cessation. We well remember the time, when it was nearly, if not entirely, as repugnant to the female to receive a common clyster, as it would be now, perhaps, to submit to the use of leeches in the way just intimated. At all events, we feel it a duty to put the public in possession of every valuable or useful remedy that experience has justified; leaving, of course, its application to the choice of the

[1] For the last few years, we have been in the habit of abstracting the blood from the inner surface of the thigh, as it seems to afford more immediate relief; for blood can be abstracted with more rapidity and certainty from this part, than from either the back or abdomen. Besides, its revulsive power may have a salutary influence.

individuals concerned. As regards ourselves, we have but too frequently had cause to lament this overweening delicacy, as we are certain, in many instances, that have fallen under our notice, *cures* might have been performed, where only relief, and that sometimes but temporary, was procured. So far, it has been our misfortune to have, in no instance, a single compliance with this prescription; but we do not despair that we may yet overcome this injurious reluctance.

2. *Purging.*

This should never be omitted; for there is no one remedy that we can employ in this deplorable disease, that is of such decided efficacy as purging. It not only comports with the general objects to be fulfilled, but it removes a prodigious source of irritation. In conducting this process, however, regard must be had, 1st, to the quality of the purgative; 2d, to the extent to which this must be carried; and, 3d, to the effects it produces.

1. It is not a matter of indifference which of the purgatives we select for the purpose of affecting the bowels, in the disease under consideration. Such should always have the preference as will sit best upon the stomach; that will operate without pain, and afford copious discharges of fluids from the intestines themselves. Such are the neutral salts; they therefore merit the preference. The sulphate of magnesia alone, or combined with an equal weight of the magnes. alb. ust.; phosphate of soda; the Seidlitz powders; crem. tart. and the flor. sulp. in equal quantities; and the sulphur and magnesia. Next to the neutral salts, we may place rhubarb, or rhubarb and aloes; the castor oil, the magnesia alone, &c.

Mr. Clarke recommends, "when saline purgatives do not agree with the stomach, but excite vomiting, an additional quantity of acid may be given with them: thus, eight or ten drops of diluted sulphuric acid may be added advantageously," p. 227.

We have known a saturated solution of the sulphate of soda, or of magnesia in small doses, repeated every morning, or every other morning, continue to agree with the stomach admirably, for months together, and move the bowels freely two or three times a day, without either nausea or pain. This solution must be taken in the quantity of a large table-spoonful, early in the morning, before eating; and, contrary to expectation, it sits well upon the stomach.

This solution is not, however, always sufficiently powerful to keep the bowels soluble; when this happens, a little calcined magnesia must be added. Where those medicines would be disgusting, the phosphate of soda, the Seidlitz powders, the cream of tartar and brimstone, or brimstone and magnesia may be substi-

tuted. The castor oil occasionally may be resorted to, but it does not, in general, answer well, when continued for a long time.

I have mentioned rhubarb, as the next best general cathartic; this is a valuable medicine in almost all cases, where a perseverance in purgative remedies is absolutely necessary, as it very seldom requires an increase of dose if it be regularly administered. But it happens with it, as with every other medicine, that it will sometimes, though rarely, lose its effect; when this happens, it should be combined with aloes. The following is the formula I generally employ:—

℞.	Gum Aloes. suc.	ʒss.
	Pulv. Rhæi.	ʒj.
	Ol. Caryoph.	gut. iv.
	Sapo Venet.	gr. viij.
	Syr. Rhæi. q. s.	M. f. pil. xxx.

One of these is to be taken every night, or every other night, as they may affect the bowels.

This form rarely requires an increase of dose, unless the bowels are rendered costive by opium, which is very likely to happen, as this drug must be used in this complaint: if this happen, two or three of the pills may be required.

It is familiar to us, that aloes is generally prescribed in all cases where the uterus yields blood too frequently, or in too large a quantity; but we believe this to be an ill-founded prejudice. We have used the pills now prescribed in several instances of this complaint with entire success, as regards the object for which they were ordered; namely, to gently purge the bowels; and, certainly, without increasing the inconveniences under which the patient was labouring.

It happens not unfrequently that the bowels become obstinately costive: nor can they be made amenable to common remedies, even in large doses: this condition is most unfortunate for the patient; for it not only deprives her of the advantages which constantly result from purging, but aggravates by a mechanical agency all the evils of her situation. In such cases, the bowels should be emptied by mild injections, when they can be thrown up the rectum; this sometimes, however, is a matter of great difficulty, but they should be made to act rather by their bulk than by their quality. The common stiff pipe, attached to a syringe, is but ill-calculated to succeed in cases where the rectum is partially obliterated by the enlarged uterus pressing against it: a flexible tube should always be used, when this difficulty occurs.

2. The extent to which purging must be carried, is next to be considered. It will readily occur, that this process should have a limit; or much mischief must ensue; indeed, its very objects would be frustrated. The use of purging is, to solicit large serous discharges from the intestines, with a view to relieve the

engorged state of the pelvic viscera, and at the same time not to weaken the system too much by its excess; consequently, if purging be carried too far, we shall have the following inconveniences to contend with; 1st, the body will be unnecessarily debilitated from the excess of discharge; 2d, we shall have mucous discharges, instead of serous, which will be attended by griping pains; 3d, instead of lessening the congestive tendency of these parts, it will increase it, by producing a sub-inflammation of the intestines; 4th, we should increase the activity of the inflammation in the neck of the uterus, by the mechanical pressure of the sigmoid flexion of the colon and rectum, in the act of passing the feces. Therefore, more than two or three easy stools per day have ever proved both inconvenient and injurious, by the disturbances they create during their passage.

3. Regard must be paid to the effects purging produces. This must be determined, 1st, by whether the discharges are attended with much pain during the operation, or immediately after: if they are, the number of discharges must be diminished; unless the pain arise from the costive condition of the bowels; 2d, by whether these discharges produce faintness, or other decided signs of weakness: if they do, they should be moderated; or, if judged proper, even suspended for awhile.

3. *Abstemious Diet.*

There is no disease, unless it be one very much more acute, that so decidedly suffers aggravation from errors in diet, as the one under consideration. We have known severe and long-continued pain to follow an apparently slight error in diet. For, it would seem evident, that, if any expectation be entertained of curing, or even alleviating this complaint, that diet, like every thing else remedial, should be made conformable to the great indications; namely, to diminish the quantity of circulating fluids; and to abate, both locally and generally, arterial action.

Therefore, the most bland articles must be selected for this purpose; as milk and vegetables. If milk agree with the patient, as a general article in diet, it should be used in preference to almost any other; it may be taken a little reduced by water, three times a day with bread, rice, Indian, or rye mush, or unbolted wheat flour mush; but especially the last, as there is almost always costiveness. The fruits of the season, tapioca, oatmeal, sago, Indian meal gruel, &c., may also be taken, the rennet whey, where the whole milk disagrees; in a word, almost any vegetable that is neither stimulating nor of difficult assimilation.

It is well known that food may offend by its quantity, as well

as by its quality; and though we have admitted a great variety of vegetable substances, it must be understood that those must be moderately indulged in; otherwise they may offend by their quantity.

The influence of this course of diet is much more efficient than we might at first be willing to admit; but the fact is unquestionable, that it almost immediately relieves pain, after it has been adopted.

Mr. Clarke very well observes, that "the quantity of food taken should be very moderate; lest, not being digested, it should disturb the functions of the alimentary canal, and become the cause of fever; or lest, being digested, it should add to the quantity of blood, and improperly increase the vigour of the system," p. 229.

The patient, it must be remembered, must be forbidden, at the same time, every kind of stimulating drink. Wine, spirits, and fermented liquor of every sort, must be prohibited with even more rigor, if possible, than animal substances, as food. Spices, or any other condiment, must be considered as coming under the same ban.

"All local stimuli should of course be avoided. Sexual intercourse must, therefore, be improper." Clarke, p. 229.

4. *By Cleanliness.*

Nothing can compensate for the want of cleanliness; yet, in this case, some care is required, to conduct it with advantage.

In the history just given of carcinoma, it was observed that there was an increase of vaginal discharge. This, if permitted to accumulate, or suffered to undergo the changes which heat always effects upon the fluids when thrown off from the system, would become offensive and highly acrid; consequently, would increase the irritable condition of the cervix uteri, from its proximity and even contact with it.

It therefore behooves the female to keep these parts extremely clean, by frequent ablutions with lukewarm water, or flaxseed tea, as well as deterging the vagina with the same material, by means of the female syringe. Many have thought to improve the efficacy of these mild applications, by the addition of certain medicaments; but we believe, that advantage has rarely, if ever, been gained by this practice; unless a substance has been expressly added to destroy the fetor of the discharge, by its chemical agency.

If the disease has proceeded to ulceration, the smell sometimes becomes almost insupportable; for now a quantity of blood is almost constantly issuing from the ulcerated surface, which,

becoming putrid, gives out so pestiferous a gas, that few can support its presence without great aversion, or even nausea.

The patient herself becomes much annoyed by this stench; often so much so, as to deprive her of both appetite and sleep; she quickly becomes debilitated, even sometimes to exhaustion, from this cause. All her evils are increased by the pervading influence of this odour; her digestive powers are so weakened, as to reject the little sustenance a wretched appetite allows her to take; and the effort to puke may renew a hemorrhage, which had been but a short time before arrested with difficulty. We once witnessed a very sudden death from this very cause: care should, therefore, be taken to guard against it.

It becomes, on this account, a matter of much importance to diminish this fetor, both mechanically and chemically: mechanically, by frequent washings with warm water, or the flaxseed tea; and chemically, 1st, by carbonic acid gas; 2d. by lime; 3d. by the pyroligneous acid; and, 4th. by the chloride of lime, or soda.

1st. By the carbonic acid gas.

We have enabled several patients to derive much comfort, as well as temporary relief, from the extrication of this gas within the cavity of the vagina, by means of a flexible tube of sufficient length and size, attached to the mouth of a bottle, in which there is mixed diluted sulphuric acid, and the carbonate of lime. This may be introduced into the vagina several times in the twenty-four hours. In two or three instances, this substance has relieved the severity of pain whenever it was employed, as well as diminished the offensiveness of the discharge.

2d. By lime.

Lime may be usefully employed in two ways; and both may be used at the same time. First, lime water, a little warmed, may be thrown up the vagina by the syringe, several times a day. One of the best forms we have tried is, where a portion of quicklime is slaked in an infusion of chamomile flowers, and permitted to settle clear before using it. The second is, by placing the caustic lime in various parts of the room, or even under the bed-clothes. For this purpose, it should be broken up into small portions, and renewed every two or three days, or so often as it is perceived to slack.

3d. By the pyroligneous acid.

The defecating power of this acid is no less certain than surprising; and for the purposes now in view, is one of the most valuable articles of the materia medica. This substance, like the lime, may be used in two ways. First, as an injection, in weak solution; we cannot give any exact directions for its strength, since it varies, as do the feelings of different patients, and even of the same patient at different times. It should at first be made

very weak, and used warm, as directed for the other injections; its strength must be increased as the feelings of the patient may permit; remembering, the stronger it can be used, the more certain is its control over the putrid exhalations. It may, at the same time, be used in its concentrated form, by wetting a folded towel with it, and placing it over the external parts—this is to be renewed when dry. The cheapness of this article enables the patient to indulge in a liberal use of it.

4th. By the chloride of lime or of soda in solution, as an injection per vaginam, beginning with a feeble solution, (a drachm of either to the pound of water,) and gradually increasing the proportions as the parts may become accustomed to the application.

5. *By rest.*

Rest is a sine qua non in this complaint; whether it be in its incipient stage, or at a more advanced period of its progress. But by rest, do not let us be understood to mean absolute confinement to bed. By rest, we mean the indulgence of a horizontal position for the body, without intervening exercise. This auxiliary acts by equalizing the circulation; by diminishing its force; by abstracting the stimulus of motion; by preventing the consequences of the pressure of the abdominal viscera upon the fundus of the uterus, and thus avoid irritating the cervix; and in cases where hemorrhage attends, by permitting the coagula, which arrests for the time the bleeding, to remain undisturbed; thus preventing the renewal of it.

It may be well to caution the young practitioner against too much anxiety for the occasional discharges of blood, which are almost sure to take place, sooner or later, in this disease; he should regard them for a time as so many leechings, from which the patient derives much immediate comfort, if not eventual benefit.

Upon the same principle, he should not attempt to arrest the purulent discharge from the vagina, by the employment of astringent or stimulating injections. We have already directed strict attention to cleanliness, by means of simple warm water: with this, there can be no fear of doing mischief by any stimulating property. But medicated injections of an astringent nature, must be forbidden; unless it may be the occasional use of a very weak solution of the acetate of lead—from this injection we have thought advantage was derived by its sedative influence, to the irritable neck of the uterus. Tonics are ever inadmissible in this complaint.

Mr. Clarke concludes his remarks on the treatment of this disease by observing, "In treating this disease, as no cure is known

for it, the practitioner must be satisfied with palliatives, and not be anxious to restore the vigour of the body, which might aggravate the disease again. Still, let it be remembered, that, by a strict attention to management, and an unwearied perseverance in the means suggested, all the cases of the disease may be relieved; in many, the farther enlargement of the tumour, or progress of the thickening, may be prevented; and if the author was not afraid of deceiving himself, or of deceiving others, he would venture to express a belief, that in a few instances, the disease has altogether subsided," p. 235.

The consolation which this last suggestion affords should be constantly kept in mind; as it holds out a strong inducement to both patient and practitioner, to persevere in the use of the remedies pointed out; shows that this formidable and loathsome disease may occasionally be prevented from running its terrible career; and restores a useful individual to society. We are equally persuaded with Mr. Clarke, that in instances of the enlargements under consideration, we have succeeded in entirely removing them by the plan laid down. And farther, that, from the success of such cases, strong inducements are held out to the timid sex to make known, at an early period, any unpleasant feelings they may experience in these parts, that the fairest chance may be given to perseverance in proper and well-devised remedies. And to the practitioner, it offers an inducement to exertion in the cause of humanity.

For the most part, after ulceration has commenced, the patient suffers much from the violence and peculiarity of the pain, which now is almost sure to attend. This is so constant, especially at night, as to deprive her almost altogether of rest. There is no alternative now, but the employment of opium, or other narcotics, which but too soon lose their influence, however we may attempt to maintain it by increasing the dose; and the patient thus early becomes deprived of the only solace art can give her.

But in this state of carcinoma, the same regard must be paid to the general state of the system, as in its first stage. For, notwithstanding absorption has commenced, and ulceration is progressing, the system becomes implicated, and the arteries are found to be much excited. A high sympathetic fever is produced, accompanied by a hot dry skin, and almost insatiable thirst, together with a sense of intense heat in the stomach itself. This burning aggravates all the other symptoms, by its intensity and pertinacity; sleep is interrupted, and the patient will sometimes almost starve, rather than take food at the risk of increasing this sensation. This feeling sometimes proceeds from acidity; when this is the case, absorbents or antacids should be given; and the frequent use of small quantities of good sweet cream, is almost sure to afford at least temporary ease.

The pulse under these circumstances, is always, we believe, excited; and in a degree that requires the loss of blood, either from the arm, or from near the part. Some may entertain fears of this remedy from the appearance of weakness which the patient discovers; but this must not create alarm; for the state of the system declares its propriety. Indeed, nature seems to offer this relief, by producing a hemorrhage from the part, which hardly ever fails to afford it. Besides, it is sure to place the system in a more favourable condition for the operation of narcotics, to which, at this stage of the disease, we must always have recourse; and happy is the patient, when she can obtain a truce to suffering, by their agency; for the pain is generally so severe and protracted, as to quickly destroy their power. For this purpose, we believe it will be found that opium, in one form or other, is the only one that can be relied upon for any length of time together.

Much, however, has been said in praise of several other narcotics, besides opium, in the disease in question; such as the belladonna, the hyosciamus, the stramonium, and the hemlock. We are sorry we cannot add any testimony in their favour. In our hands they have fallen far short of the anodyne powers of the opium; and have constantly failed to merit the high encomiums which have been bestowed upon them.

I am happy to find myself supported in this experience, by Dr. Chauffard.[1] After pointing out the great abuses committed by persisting a long time in the use of narcotics, he observes, "The violence of pain often forces us to the administration of narcotics: but do not let us forget, that in such cases, two or three grains of *opium* will succeed better to calm it, than forty grains of the other extracts. I have seen eight grains of opium, in a terrible cancer, afford more complete comfort or relief, than two drachms of the extract of aconite, and this without worrying the digestive organs or disturbing the intellectual faculties in any like degree: and also much more promptly. This substance, (opium,) would procure some moments of refreshing sleep, which could not be obtained from the other." This is truly a matter of regret; as it abridges our resources at a period when so few can be commanded, yet when so many are required.

So frequent and so uniform have been our disappointments, that we neither consider the belladonna, hyosciamus, stramonium, nor the hemlock, as substitutes for opium. And though altogether aware how unfriendly some of its properties are to many constitutions, yet we cannot, as a general remedy, give it up for any other, with which we are acquainted.

Every preparation of opium is not equally objectionable; the

[1] Memoire sur l'emploi et l'abus des medicaments stupéfiants les plus usités.—Trans. Med. &c. for July, 1830.

common laudanum is, perhaps, the most so of any; even more so than in its solid form. The least, (if we except morphia,) is the acetated tincture of this drug; or what is commonly called "the black drop." In this form, several of its unfriendly tendencies are obviated altogether; and almost always, are very much diminished. It is seldom followed by headache or nausea; nor does it constipate the bowels, in any like degree, as the laudanum. It, therefore, always merits the preference, when it can be commanded; and when it cannot, much of the inconvenience of the laudanum may be avoided, by mixing the dose with sweetened vinegar; or by the addition of a few grains of the carbonate of soda or potash.[1]

It has been a usual practice in carcinoma, to give the cicuta in increasing doses. We have thought that we have sometimes derived a temporary benefit, but we have never witnessed a permanent advantage from it, to whatever extent we have carried it. We have thought, however, that opium was more certain to give relief from pain, while the patient was using the hemlock, than when she was not under its influence.

We have frequently found, in the same patient, that opium would procure rest at one time much more certainly than at another, even under the same circumstances, as far as could be determined. Why this has happened, we cannot pretend to say; but when opium has failed, we have found that camphor, in liberal doses, would oftentimes succeed. Indeed, we have several times found that the camphor was a valuable addition to our slender means of procuring rest, in cases of severe pain from ulcerated carcinoma; and this especially where opium disagreed, or had worn itself out. We have also, in several instances, found that the spirit of turpentine, in twenty drop doses, has also procured sleep, when it could not be obtained by opium. The same may be said of the liq. anod. Hoffm. in tea-spoonful doses.[2]

When opium either disagrees, or its efficacy is waning, giving it in the form of an enema, has very often a most happy effect. When employed in this way, a treble dose of the laudanum, in two ounces of warm water, should be given at a time; and repeated, pro re nata.

[1] Since the above was written, we have become possessed of a preparation of opium that bids fair to supersede almost all the others; namely, the "denarcotized laudanum." This is prepared from opium, that has been divested of its narcotine. It sits most kindly upon the stomach; and is very rarely followed by the after consequences of the common laudanum, even in those who are generally obnoxious to them. Morphia itself offers a valuable resource; it is very certain in its effects, and is not usually followed by the inconveniences of the other preparations. It may be given either in substance or in solution; one-sixth of a grain is about equal to one grain of opium, or thirty drops of laudanum.

[2] Care should always be taken that this substance has been faithfully prepared, See note to page 217.

When the stomach becomes affected, the case is always more deplorable, for reasons easily imagined. This rarely takes place, as a sympathetic affection, until ulceration has commenced; and when it does, it goes on, pari passu, with the ulceration, and becomes even more distressing sometimes, than the original complaint.

We have but a sorry choice of evils, when this condition of the stomach exists; for we are generally obliged to give up a system of diet, which is best calculated to mitigate the uterine sufferings, for one which is better adapted to appease a rebellious stomach. We must give up the vegetable course of diet, for one of animal substances, that we may tranquillize this organ; and we must also neutralize the predominating acid, by the various antacids, or by the sulphuric, or nitro-muriatic acid, in small, but often repeated doses.

One of the best sitting substances that we have found, when the stomach is extremely irritable, is rich sweet cream; this must be given by the tea-spoonful; and repeated every fifteen or twenty minutes.

We shall conclude this account of carcinoma, with giving an extract from Mr. Clarke's work, so often mentioned. We do this, because his remarks upon this terrible disease are judicious, and bespeak the experienced practitioner, as well as the man of feeling. Moreover, there are some views of the disease which are novel, and a part of practice and resources, that is not sufficiently familiar to the American practitioner. We have preferred giving his opinions and suggestions in his own language, to condensing them, though at the risk of being blamed for so long a quotation, by those who have not yet met with the disease. But, from the practitioner who may have such a case in hand, and whose resources are nearly exhausted, we fear no such censure: on the contrary, we are sure we shall receive his thanks for any new suggestion that will, for even an hour, relieve his suffering patient.

"The management of the discharge from carcinomatous sores, is a circumstance deserving the best attention of the surgeon. This discharge appears to have the power of converting the neighbouring parts, to which it is applied, in some instances, into sores of a similar character to that by which it was itself secreted: and there is reason to believe, that the spreading of carcinomatous ulceration may be greatly retarded by the employment of those substances which absorb or remove the ichorous fluid secreted by them. Common aphthous sores, which frequently arise in the vestibulum of women, who have long laboured under diseases of the female organs, may also possibly be converted into malignant ulcerations. These observations especially apply to carcinomatous ulcerations of the internal parts, in which the discharges are

more likely to be retained, than where the disease attacks external surfaces. If it were only that the fœtor attending such sores would be removed by cleanliness, attention to this circumstance would be of great consequence, inasmuch as the patient's health, and that of such persons as may associate with her, will be less likely to suffer, than when constantly breathing an impure atmosphere.

"Of all the modes of applying water to sores at the upper part of the vagina, none is so effectual as the use of the hip-bath; in the employment of which, the water is brought into contact with the sore without any risk of infusing the latter. By these means, the object of maintaining cleanliness is not only obtained, but a soothing application is made to an irritable surface; the carefully injecting warm water into the vagina, by a syringe, or the agitating the water with the hand, will render it more likely to remove any portions of coagulating lymph, or thickening matter, which may adhere to the inside of the vagina. The heat of the water employed should depend upon the feelings of the patient in some measure; but, generally speaking, it may vary from about eighty-six to ninety-four degrees. Where the patient is too weak to bear the exertion of being put into a hip-bath, her hips may be brought over the edge of the bed, and warm water may be carefully injected into the vagina by a small syringe. The quantity of the discharge is frequently increased by the means above-mentioned, but the comfort which the patient will derive from it will abundantly compensate her for any debility which may be produced by the remedy; and excruciating attacks of pain are sometimes rendered very sufferable by a frequent recurrence to it. Strong decoction of carrots, sometimes used for the same purpose, has the happiest effects. Warm water may also be made the vehicle for a variety of sedative applications, which are found by experience to tranquillize all irritable sores; and, in some, to expedite the healing process. Amongst the different applications for this purpose, the extractum conii, or extractum hyoseiami, may be mentioned, either of which may be employed in the proportion of about three or four drachms to a pint of water. Solutions of opium, or of extract of poppy, may also be used; of the former, two drachms; of the latter, half an ounce may be dissolved in each pint of water. Starch or mucilage of quince-seed, form good menstrua for these applications; their adhesive property enabling them to cling to surfaces to which they are applied. Three or four ounces of either of these fluids, impregnated with sedative substances, may be thrown into the rectum, in those cases where relief is not obtained by their application to the vagina; but when opium is used for this purpose, the practitioner should be very careful to watch over its effects, as it has sometimes happened that unpleasant consequences have arisen from

the application of this drug to the rectum, such as vomiting, syncope, cold extremities, and irregularity of circulation. The action of the absorbents of the rectum is, in all probability, in these cases, increased by the inflammatory process which exists in the vicinity; besides which, the action of the rectum itself is temporarily taken off, so that the enema will probably be retained during a considerable length of time. Plasters and liniments, into the composition of which opium enters largely, will sometimes be found serviceable in allaying pain, and are useful auxiliaries in a disease, in which all the resources of the practitioner may be required to diminish the sufferings of the patient.

"There are some applications which produce a sedative or a stimulating effect, according to the strength of which they are used. A very diluted mixture of acetic acid, or of nitric acid in water, will form a soothing application to an irritable part, whilst, in different proportions, they will become highly irritating. Either of the lotions mentioned beneath may be employed.

℞. Acidi acetici, - - - - ℥ss.
Aquæ distillatæ, - - - Oj.—M. f. injectio.

Or,

℞. Acidi nitrici, - - - - gutt. x.
Aquæ distillatæ, - - - Oj.—M. f. injectio.

Or,

℞. Liquoris plumbi acetatis, ℥j.
Acidi acetici, - - - - ℥ii.
Sp. Vinosi. - - - - - ℥j.
Aquæ distillatæ, - - - ℥xvss.—M. f. injectio.

"If the discharge should become so profuse as to induce great debility, injections which possess an astringent power must be sought for.

℞. Decocti corticis granati, - Oj.
Sulphatis aluminæ, - - ℥ss.—M. f. injectio.

Or,

℞. Zinci sulphatis, - - - ℥ss.
Aquæ distillatæ, - - - ℥xv.
Tinct. Rino. - - - - ℥j.—M. f. injectio.

"If the discharge should assume a sanguineous appearance, it should be considered how far it would be safe to permit its continuance. If the patient should be in great pain at the time, it may be right not to restrain it hastily, unless the patient's strength should have been previously much exhausted; but if it should appear desirable to diminish the hemorrhage, the astringents which have been before recommended, may be employed, and their strength may be increased, or the following may be employed in their stead:—

℞. Argenti nitratis, - - - - - gr. x.
Aquæ distillatæ, - - - - - Oi.—M.

Or,

℞. Cupri sulphatis, - - - - - ʒss.
Decocti cinchonæ, - - - - Oi.—M.

"Respecting internal remedies, although no one has as yet discovered any medicine capable of removing the disease, it may not be too much to state, that there is scarcely a medicine of any class which may not, in some way or other, or at some period or other, be useful in this complaint. Various are the symptoms which may arise; various must be the means of obviating them; and he will be the best practitioner, who best understands the adaptation of these means to their end. To point them out here, would be an endless labour, and a waste of the reader's time.

"It may be sufficient to observe that the patient should be treated upon general principles, bearing in mind, on the one hand, the hitherto intractable nature of the malady, and on the other, the sufferings of humanity, which call loudly for relief.

"Pain, the great evil of life, is the symptom by which the patient will be most distressed; and, happily, in the sedative class of medicines, there are to be found many capable of relieving it.

"It should be a rule of practice, never to exhibit a sedative of great power, when a milder will produce equal relief; because the disease is one of long duration, of increasing suffering, and every medicine will at length fail in producing its effect.

"Hyosciamus and conium may be amongst the first employed, and the dose of each may vary from three to eight, or ten grains. Larger doses have been exhibited; but the object is not to know how much of these or of any other drug can be taken with impunity, but how much is necessary to produce the desired effect. If they are wantonly employed, the patient will be exposed to another set of symptoms, arising from a disturbed state of the stomach, and of the brain; as flatulence, heartburn, eructations, delirium: the necessity for the exhibition of these medicines, must regulate not only their dose, but the frequency of their exhibition.

"Extractum stramonii is another serviceable remedy in allaying pain, and it may be given in doses of a grain.

"The writer is not in the habit of exhibiting belladonna, having once seen a patient nearly destroyed by two small doses of it. Other practitioners, however, have employed it, it is said, with advantage. Mr. Brodie has informed the writer, that he has seen the happiest effects produced by a suppository containing extractæ belladonnæ, gr. j. in cases of irritable bladder, and also of carcinoma of the rectum. Perhaps, therefore, in those instances in which the administration of other sedatives is un-

availing, it may be advisable to administer the above medicine in the form alluded to.

"As the symptoms become more pressing, and as the sufferings of the patient increase, still there will remain to the practitioner one resource, and to the patient one solace, in opium, by means of which, her distresses may be alleviated, and her passage from this world to another rendered less agonizing. It will not be sufficient simply to prescribe a dose of opium, at stated intervals; that dose must be proportioned to the necessity for its use; and the skilful combination of it with other medicines, and the selection of its different preparations, will call forth the happiest efforts of the practitioner: in one case opium in a solid form will be found to agree; in another the tinctura opii of the pharmacopœia will better answer the purpose; in the third, the preparation known by the name of black drop; in a fourth, the liquor opii sedatives of Mr. Beattie, will quiet the patient, and at the same time produce the least disturbance in the system; whilst the irritable state into which some patients fall, will be most successfully diminished by the very small quantity of opium which enters into the composition of the tinctura camphoræ composita.'

"In the greater number of painful diseases, which call for the use of opium, less care is required; but the sympathy of the stomach is so actively called forth, when the uterus is the seat of this disease, that it will be capriciously inclined towards one medicine, whilst it receives another with great comfort and advantage. If, as always happens towards the close of ulcerated carcinoma of the uterus, vomiting should come on, the combination of spices with opium, will render this medicine more agreeable to the stomach. The julepum menthæ, cinnamon water, and, in some cases weak brandy and water, will form the best vehicles for the different preparations of opium; sometimes a mixture of confectio opiatæ and spiritus ætheris sulphurici compositus, given in peppermint water, in small doses, at short intervals, will relieve, in an expeditious and certain manner, the vomiting, singultus, and eructation, more effectually than any other combinations of medicines."

Sect. III.—*Of the Polypus of the Uterus.*

This disease of the uterus the author has never seen;[1] he is

[1] Since the period stated above, I have seen several cases of "polypus of the uterus," one of which was fatal. Mrs. ——, aged forty-five years, was attacked with pains resembling labour. After they had continued with more or less severity for thirty-six hours, I was requested to visit her. I found her labouring under powerful pains, which were almost without intermission, and of great force. I immediately examined per vaginam, and found a tumour of the size of a child's

therefore under the necessity of drawing his account of the polypus from the experience of others. He has endeavoured to give a faithful history of this complaint, by consulting those he esteems to be the best authorities upon this subject; namely, Levret, Denman, and Clark.

It would seem to be fairly presumable, that this disease is of more rare occurrence in this country, than in Europe; since, in the practice of the gentlemen just named, many cases have occurred; while in this, the experience of a number of gentlemen whom I have consulted has not furnished one. This would also seem to call in doubt one of the causes assigned for the production of this disease; namely, injuries which the uterus may have sustained during labour; for it is to be presumed, that were this a common cause, the American women would have a greater claim to polypi, than they appear to have.

Dr. Denman says, "The cause of polypi is supposed to be some accidental injury done to the part at the time of labour or otherwise; but more commonly, it is a spontaneous disease, proceeding from a certain disposition of the constitution, or of the part itself; as those who have a polypus of the uterus are apt to have excrescences from other parts; and they sometimes exist in those who have never been pregnant, and even in virgins."—Introd. Francis' Ed. p. 123.

Mr. Clarke defines polypus to be an "insensible tumour attached to the internal part of the uterus, by a small neck, forming a disease of a very important character," p. 243, vol. i. This definition does not exactly correspond with the history given of this complaint by Dr. Denman: he says, "Some of them hang by a small pedicle, and others have a broad basis, especially at their commencement,"[1] p. 123. Nor is it so satisfactory as the

head at seven months, occupying, or rather advancing through the vagina. Suspecting the nature of the tumour, and fearing it would invert the uterus if it did escape from the os externum, I opposed its passage, with all the strength I could make to bear upon the part, but without success, for in defiance of all opposition, the tumour was pushed without the vulva. It was attached to the uterus by a short neck, and the tumour had inverted this organ upon its escaping from the vagina. I endeavoured to restore the mass, but without success, as the parts were so extremely sensible, that the woman could scarcely endure the slightest touch. The tumour soon became black, and very offensive; the woman had been exhausted by a long-continued discharge of blood of some months' standing, together with a considerable hemorrhage during the effort the uterus made to dislodge the tumour: she died the next day. Leave could not be obtained to examine the body, as it was in extremely hot weather, and was to be removed some distance into the country.

[1] A lady from Savannah, Georgia, consulted me for a polypus of the uterus, in July, 1830. Upon examination, it proved to be small, and its pedicle very slim. It was seized by two fingers and the thumb, and drawn down to the os externum: in doing this the tumour separated at its attachment with the uterus—it caused no pain, nor did the smallest hemorrhage follow. As I have not heard from the lady since, I presume she has suffered no farther inconvenience, though she had been very much reduced previously by repeated hemorrhage from this tumour.

definition of Levret: he makes it "an indolent circumscribed tumour, more or less salient, resembling a fleshy or fungous excrescence, covered by the membrane from which it takes its rise, and which is of greater or less thickness."—Obser. sur la Cure radical de plusiers Poly. de la Matrice, &c., p. 2.

Levret makes three species of uterine polypi: but this is certainly an unnecessary distinction, since his species are derived from the situation of the polypus in the uterus, and not from a difference in their organization; therefore, properly speaking, it is a mere difference of location. He says his first species, which he declares at the same time to be the most common, has its origin or attachment from the fundus of the uterus; the second, which is less frequent, takes its origin from the neck of this organ; and the third, which is the most rare, has its pedicle attached to the margin of the orifice of the uterus, p. 14. He has given plates to prove the different locations of these tumours, which we have copied. See Plate IV.

These substances are vascular in different degrees; and, agreeably to Levret, the veins are large in proportion to the arteries. The latter become varicose in that species which is confined within the cavity of the uterus, or has its origin from its fundus.

The first species of Levret is always attended, at a certain period, by hemorrhage; and is of course always accompanied by an increase of size of the uterus. A sense of weight, or bearing down, is experienced, of more or less intensity, as the polypus may be large or small. It is of uncertain size; and may employ a longer or shorter period for such a growth as shall be either very troublesome, or strongly engage the woman in a consideration of her situation.

It occasionally grows very large, and distends the uterus so much that it can be distinctly felt above the pubes. When it acquires this volume, and oftentimes before, there is found a discharge from the vagina, which in the commencement is serous; but may soon become purulent and sanguineous.

If a finger be introduced into the vagina, the os uteri will be found open to an extent much beyond its natural size; and will permit the point of the finger to penetrate the cavity of the uterus, in which a substance will be felt of greater or less firmness, and of different degrees of inequality. The finger, if it be made to pass a sufficient distance within the womb, can be turned round the body, which the uterus seems to enclose. This examination may be followed by a very small, or a very large flow of blood.

Since the above was written, I have heard from her husband, who assures me she is perfectly well.

The woman is almost always troubled with a discharge of blood, which at times seems to assume a periodical movement; or it may only be more abundant at certain periods, while a constant but moderate flow fills up the interval. Pain of a periodical kind sometimes ensues; and this may be so long continued and severe, as to force the tumour from the cavity of the uterus into the vagina, and even through the os externum.[1]—When this takes place, it is generally mistaken for the uterus itself, and has been called by many a descent of this organ. The following case will show the nature of this disease.

Mrs. B. had suffered from time to time nearly eighteen months with a profuse discharge of blood from the vagina, for which much had been done, but to no useful purpose. She was about twenty-three years of age, had had two children, and was, previously to these discharges, of a good constitution. She came to this city to place herself under my care—at this time, she was very feeble, and almost bloodless, as she had suffered a most profuse hemorrhage a few days before. By an examination per vaginam, I discovered a polypus about the size of a walnut, the pedicle of which was within the uterus. I begged the assistance of my friend Dr. Horner. We applied a ligature without difficulty close to the os tincæ around the neck of the tumour—it separated in about four days without any unpleasant symptoms, though the patient laboured under *the fever from excessive hemorrhage*, for nearly two weeks. This, however, yielded gradually; and she returned home free from disease, and continued to improve up to the last account we received of her.[2]

It is this condition of the polypus, which has given rise to the absurd stories related by many of the older authors, especially Cesalpinus, Ætius, Paul Eginetta, Carpi, &c.; of the uterus having been amputated, and the woman conceiving afterwards. Levret, sur Polypus Uterine, p. 29.

The mechanism of the expulsion of the polypus is very similar to that of an abortion;[3] that is, the os uteri is gradually, but

[1] See Dr. Denman's cases at the end of this chapter; and the case just related, page 261.

[2] Since writing the above, I have met with several cases of polypi, all treated with the happiest effects by ligature.

[3] The explanation of Levret, of the mechanism which nature employs when she attempts the expulsion of this species of polypus, is so ingenious, and so conformable to the general laws which govern the uterus, that we cannot resist the temptation to transcribe it at length.

"Le polype utérin de la premiere espèce ayant une fois pris naissance au fond de la matrice par quelque cause que ce puisse être, croit peu à peu sans que la femme ni le chirurgien même s'en apperçoivent; en effet, lorsque la malade se plaint pour la premiere fois on ne peut d'abord décider si la cause de son mal est un polype ou toute autre maladie: car il n'y a dans les premiers tems aucun signe charactéristique de son existence.

"Ce corps étranger ayant acquis avec le tems plus de volume, oblige la matrice

successfully opened so far as to permit the extrusion of this substance. When this takes place, the body of the polypus is without the os uteri, while its pedicle maintains its attachment to the inner surface of the uterus itself. If it be examined now, it will appear to occupy the vagina, and might be supposed to proceed from its surface; yet, by a careful search, its pedicle will be found to be within the uterus, and the os uteri surrounding it entirely, as a sphincter; and as such it acts, agreeably to Levret. The polypus has been suddenly discharged from the cavity of the uterus, by falls or other violence.

He says, that in this species, "hemorrhage is necessarily a consequence; but that it never appears, until the body of the tumour has in a great measure freed itself from the orifice of the uterus, and until it begins to extend itself into the vagina; then the sphincter of the uterus, (that is, the os uteri,) compresses the external veins of the polypus; in consequence of which, these veins become varicose, and finally burst; and their rupture gives rise to a hemorrhage, which is renewed at irregular periods," p. 25.

It does not appear to disturb the economy of gestation, or interfere with the process of labour in some cases; Dr. Churchill gives an interesting account of a labour that was successfully terminated, but which had a fatal termination, owing to a polypus in the uterus; we will relate it in his own words. "The patient after a natural labour, appeared for awhile to be going on well. In a short time, however, a flooding came on, resisting all the usual means for arresting uterine hemorrhage, and in eight or ten hours the patient died. Upon examining the uterus after death, there was a large cellular polypus, descending from the fundus, and which it was evident had prevented the due contraction of the uterus. No vessel could be detected in the polypus."—Churchill on the Principal Diseases of Females, p. 191.

à se dilater, quoique, par degrès très insensibles; mais comme l'attache de cette tumeur occupe, dans tous les tems, au fond de la matrice, bien moins d'espace que le placenta d'un enfant, en quelqu' etat d'accroissement que soit ce dernier; toutes choses néanmoins étant d'ailleurs égales, il faut, non pas que le fait dilater l'arrière-faix dans la grossesse; mais que les parois de ce viscère se prêtent un peu, de même de son fond, a cette puissance dilatante étrangère. Or il n'est point en ces cas des loix naturelles à sa destination qui sollicitent les parois de cette organe; elles doivent donc résister: le polype doit être comprime; il doit donc aussi s'allonger, plus ou moins, à raison de son plus ou moins solidité. Alors il s'insinue dans le col de cet organe, parce qu'il y trouve moins de résistance. Parvenu au sphyncter de l'orifice, il le force peu à peu, et s'introduit dans le vuide qu'il s'y pratique, comme le feroit un coin: enfin l'extrémité du polype ne trouvant plus rien qui le gêne s'etend en avant et au large dans le vagin, et la tumeur prend plus ou moins de volume, selon que le permettent mille diverses circonstances, qui sont plus aisées à concevoir qu' à détailler.

"Le pédicule ne peut pas s'etendre au large comme le reste de la tumeur, l'orifice de la uterus qui souffre un espèce de violence, le comprime; le polype est donc comme étranglé en cet endroit: il faut qu'il prenne la figure pyriforme; de la naissent les varices; c'est la vraie cause de l'hemorrhagie, p. 38."

These frequent bleedings, if not relieved by the removal of the tumour, eventually exhaust the woman; but rather by their pertinacity, than by their immediate excess; yet examples are upon record, where a sudden hemorrhage has destroyed the woman immediately. Levret, p. 30.

These polypi seem not in general to do injury to the proper substance of the uterus; for several relate, that this organ was found sound after deaths occasioned by the wasting hemorrhages from the surface of the tumours. Levret, p. 42.

Agreeably to Levret, the signs of this species of polypus are, "Whenever we examine a woman who has been labouring under a discharge of blood from the vagina, or of a falling of the womb, whether they are both found together, or separately, if we find in the vagina a pyriform body, the insulated top of which passes through the orifice of the uterus, without destroying its circular form, we may always with certainty be assured, if we except pregnancy, that it is a polypus attached by its pedicle to the uterus, and that it is in the most favourable condition for the ligature," p. 48. See figure 1, Plate IV.

In the second species, the finger cannot pass entirely around the pedicle, as in the first; and the point which opposes the finger making its circle is a little above the orifice of the uterus, and is found to be the pedicle of the polypus, inserted on the outside of the neck of the uterus. The os uteri may also be felt. See fig. 2. Plate IV.

This species is not commonly accompanied by hemorrhage, because the pedicle does not become strangulated, as in the first; but there is an increase of vaginal secretion. This species, nevertheless, is a genuine polypus.

The third species is thus distinguished: when there is in the vagina a moveable tumour, with a narrow neck attached to the orifice of the uterus, but in such a manner as to leave the orifice free, we may be pretty certain that it is a polypus of this kind. In this case, the mouth of the uterus will be obliquely situated, as regards the axis of the vagina, in consequence of that part of the neck of the uterus to which the tumour is attached descending a little lower than the other portions of it, from the weight of the tumour. This species is not necessarily attended by hemorrhage.

All these species have but one common remedy; namely, extirpation by ligature. In the first, it will be seen, that this remedy cannot be applied, until the tumour has descended into the vagina, and consequently will not admit of a cure, until that event takes place. It would then seem desirable that this escape of the tumour from its confinement should be promoted, if possible, so soon as it shall be determined that there exists a polypus within the uterus. But how shall it be ascertained, that there is a tumour in the cavity of the uterus, since no particular symptoms mark

this condition until it falls into the vagina? There may be a great difficulty in distinguishing this condition at such a period; but we are informed, before this takes place, the woman suffers pain resembling labour; and when pregnancy cannot account for these pains, nor dysmenorrhœa, it might be well to examine the patient per vaginam. In such an examination, the tumour might be felt, making its way through the os uteri: if so, it would be every way desirable to facilitate its progress; and for this purpose I would ask, what would be the probable effect of the secale cornutum?

The uterus will also be found enlarged, and may be felt above the mons veneris; at least this will be the case for a certain period; or until the tumour shall pass, either in part or altogether, through the os uteri.

Nothing illustrates the routine of practice so well as the recital of cases; and no cases can be more interesting and satisfactory than those related by Dr. Denman. We shall, therefore, transcribe them for the benefit of those who may not have the advantage of possessing his work; as well as conveying to such, in perspicuous language, the histories of several highly useful cases, treated with all the ability that that great metropolis, London, could furnish.

Case First.

"A single lady, twenty-two years of age, had, for a considerable time, been subject to frequent and profuse returns of uterine hemorrhage, which resisted all the means that could be devised for her relief, and at length reduced her to a state of great weakness. Dr. Turton, (whose worth and continued friendship to me, I am happy on every occasion to acknowledge,) was the physician who attended; and he, suspecting some local disease, desired I might be permitted to make inquiry. I discovered a polypus, not of a large size, lying low in the vagina. When I came to pass the ligature, there was much embarrassment from the state of the parts, any injury to which I was solicitous to avoid. On the fifth day from the time of my passing it, it came away; but the polypus could not be extracted without much caution and trouble. There was no return of the hemorrhage; she soon recovered her strength, and in a few months was married. She has since had seven fine children, with safe and easy labours. This polypus weighed four ounces."

Case Second.

"Another young lady had long suffered from frequent uterine hemorrhages, together with most violent pains recurring in the

manner of those of labour. High up in the vagina, just cleared through the os uteri, I discovered a small polypus, round which a ligature was with difficulty passed. The late Mr. Hunter was with me at the time. When I began to tighten the ligature, she complained of very severe pain, and presently vomited. The ligature was immediately slackened, but on every future attempt to draw it tighter, the symptoms were instantly produced. After many trials, I was obliged to desist altogether, leaving the ligature loose round the polypus; merely to keep up, in the mind of the patient, some faint hope of benefit. The health of this patient was very bad when I first saw her, and in about six weeks from the time of the operation she died.

"Leave being given to open the body, the uterus was found inverted, and the ligature to have passed over the inverted part, which occasioned all the symptoms before mentioned. This polypus could not have weighed more than one ounce, and had a very short, if it could be said to have a stem; so that the uterus could not in this case have been inverted mechanically, but by its own vehement action, excited to expel the polypus, which, like any other extraneous and offending body, was a perpetual cause of irritation."

Case Third.

"Many years ago, I visited a lady, who had for a long time suffered greatly from various uterine complaints, and was supposed to have a cancer in the uterus, of which a general aspect gave very strong indications, but on examination I found a large polypus in the vagina. The late Dr. Ford, than whom no one was more intelligent or expert in practice, was in consultation with me. I passed the ligature and drew it tight, confidently expecting a happy termination of the case. The stem of the polypus was very thick, and it required eight or nine days' action of the ligature to divide it. When I had removed the polypus, I was very much mortified to find a new substance, nearly the size of that which had been taken away, in the vagina. Her health being very infirm, it was thought advisable for her to go a short distance in the country, for the chance of establishing her health, before another operation. But a colliquative diarrhœa with aphthæ, came on; she gradually declined, and about the end of the month she died.

"Of this repullulation, if it were such, I have never seen any other instance, so early after the operation; and it might be attributed, 1st, to the thickness of the stem; or, 2d, to the slow decay of the stem; or, 3d, to a cancerous disposition of the uterus; or, 4th, to a large portion of the polypus remaining in the uterus; besides what was discoverable in the vagina. If a case similar

to this were again to occur to me, I should certainly act more speedily with the ligature, and however reduced the patient might be, should feel justified in passing the ligature on the second excrescence, as affording the only chance of saving the patient; but this is, perhaps, to be considered as an instance of the great mischief done to the constitution, by too long delaying the operation."

Case Fourth.

"A lady, about sixty years of age, who had several children, had, with violent pain, frequent hemorrhages from the uterus, so profuse as to bring her at each time of their return into the greatest danger. When she permitted me to make an examination, there was no polypus in the vagina, but the uterus was much distended, and the os uteri being opened nearly to one third of its circumference, I could discover within, and pressing upon it, a tumour of apparently a very large size. In the course of a few weeks, an immensely large polypus dropped into the vagina.[1] Her health was much reduced, and the extirpation of the polypus appearing the only chance of saving her, I made many and strenuous attempts to pass the ligature, but without success. I then procured a large and different instrument, like that used in tying the tonsils, but with this I was also foiled. In my endeavours to pass this instrument round the polypus, the surface was abraded, a blood vessel of a considerable size was wounded, and there was a loss of blood which rendered the patient still more weak. After a few days without any instrument, I gradually introduced my hand into the vagina, got the ligature over the polypus, and then tightened it. Dr. Orme and Mr. Croft were with me at the time. But many complaints came on, and she died in a few days, before the polypus could be extirpated.

"The blood vessels which convey nourishment to a polypus probably bear a relation to its size, and must, of course, be sometimes very large, so that in passing the ligature, it behooves us to be very careful that we do not wound the polypus; and, perhaps, in every case when the polypus is large, it would be better, if possible, to introduce the hand, for the conveyance of the ligature, than to use the instrument. Much will also depend on the texture of the polypus, which is sometimes so slight as to resemble an injected and corroded liver or kidney. I remember a case in which, though I only took a common examination, and the usual caution, so violent a hemorrhage was occasioned, that I thought the patient would have died instantly. Were a case similar to

[1] In this case the secale cornutum would most probably have succeeded in expelling the tumour, and should always be tried in such cases.

this to occur to me again, I should be disposed to try the effect of styptic injections, deferring any attempt to pass the ligature, till I had seen the effect which would be produced by them.

"The three preceding cases are the only ones, among a very great number, in which I have not been successful; and I have judged it right to state them thus circumstantially to set others upon their guard, and to prepare them for the possibility of disappointment.

"In the museum of the late Dr. Hunter, there is a large polypus from which an engraving was made, and by the register it appears, that after many attempts to pass the ligature, without success, this patient died. Perhaps by a knowledge of the causes of the miscarriages of others, (as in case 4th, just recited,) subsequent trials, even in the polypi which are of the largest size, may be more fortunate. I have very great pleasure in relating the following case which was lately under my care."

Case Fifth.

"A foreign lady, who was born and had lived the greatest part of her time in a hot climate, applied to me. She had had every day, for more than three years, a very considerable discharge of blood from the uterus, together with others of a different kind and complexion, by which her strength was very much reduced. She had been attended by different gentlemen, who had not given any decided opinion of the nature of her disease. When I first examined her, I was indeed very much surprised; for not only the whole vagina was filled up with a fleshy substance, but the os uteri was as completely dilated as when the head of a child is passing through it, and the cavity of the uterus appeared to be much distended and filled with the same substance. I at first hesitated whether I should make an attempt to pass the ligature, as I could not reach the stem of the substance, but after deliberating on the state of the patient, who must soon perish, unless relief could be given, and knowing that if the ligature could be passed, I should have the power either of proceeding, or of stopping on the appearance of any untoward symptom, I determined to make a trial. The first and second attempts to pass the ligature were fruitless, but I at length conveyed the ligature beyond the bulk of the tumour, and far beyond my reach, by means of a piece of thin cane notched at the end. The ligature being daily drawn gradually tighter, was at liberty on the sixth day. The external parts were unusually contracted, and as any endeavours to bring away the polypus at that time must have failed, it was left in the vagina to soften and decay. On the ninth day after the ligature was come away, she had pains as regular

as those of labour; and when the os externum became somewhat dilated, I laid hold of a portion of the tumour, first with my fingers and then with a small sharp-pointed hook, favouring the expulsion of it as well as I could during the pains, by which it was at length propelled with considerable force, after a labour of four hours' continuance. From that time to the end of five weeks, there was not any discharge of any consequence. Then she menstruated regularly, and returned home in perfect health.

"This polypus, which was the largest I ever saw, was put into the hands of Dr. Baillie, who saw the patient during the operation. It weighed two pounds and three ounces; so that, allowing for its decay, perhaps it could not originally have weighed less than three pounds. But the violence of the symptoms does not always depend on the large or small size of the polypus.

"When polypi are too large to be extracted without much difficulty after their separation, no harm can arise from their remaining some days in the vagina, as I have found in several instances; and their bulk hourly lessening by decay, their extraction is rendered more easy.

"These cases lead to an observation on the difference between what is properly meant by the terms polypus, and excrescence. By the former is to be understood those excrescences that arise distinctly from the uterus or vagina; and by the latter, a morbid enlargement of those parts. The first of these generally admits of extirpation with safety and advantage; but the latter, though they admit of extirpation, and even promise success, cannot with propriety and safety be removed."

Case Sixth.

"We were called to Mrs. A. in January, 1833, who was losing much blood every few days from the uterus. Upon examination per vaginam, the mouth of the uterus was more open than natural, admitting the point of the finger to pass a little distance within it without difficulty: the whole neck was larger than usual, but nearly of the ordinary length. Rest, and restricted antiphlogistic diet was ordered, with injections, per vaginam, of pretty strong lead water; that is, two drachms of the acetate, to ℔iss. of water, three or four times a day. These would seem to control the hemorrhage temporarily, but they would recur, at short intervals, and by very slight exertions. The cicuta, in increasing doses, together with liberal doses of the extract of rhatany, were steadily persevered in, with some degree of advantage as regarded the quantity of discharge. This plan was persevered in until August; at this time, an alarming discharge took place, so as almost to exhaust my patient. On an examination now, the neck of the

uterus was found much enlarged, and it immediately occurred to me, that this enlargement was owing to a concealed polypus making its way through it: with a hope of ending this work, I ordered thirty drops of the vinous tincture of the secale cornutum every four hours. In the course of 48 hours, slight uterine pains were produced, which were permitted to continue for two days, and were then checked by morphia; at the end of a week, they were again renewed, and so on at intervals, for two months. On touching the mouth of the uterus now, a smooth round body, of the size of a large cherry, was perceived at its extremity, which, to my great satisfaction, confirmed the opinion I had given: the hemorrhage was now very much diminished, and could always be stopped by a small tampon of sponge. In this manner things went on for several months, the substance gradually protruding itself, by the occasional use of the tincture of ergot, and eventually, by December, 1834, the uterus freed itself of a polypus as large, nearly, as a goose-egg, forming a neck or pedicle of considerable thickness, more than an inch in diameter. I applied the wire ligature, and the tumour fell off on the eleventh day; no unpleasant symptom attended its application or followed its separation: my patient is rapidly recovering from the immense loss of blood, during a period of more than two years' continuance.

"The late Dr. Hamilton, of Glasgow, obliged me with the drawing of a polypus which weighed one pound and four ounces, and had dropped through the os externum, inverting and dragging along with it the fundus of the uterus. The patient died. Had the nature of this complaint been understood in due time, it would, in all likelihood, have been possible to have tied and extirpated it, before it had occasioned so much mischief. It is an example, among many others, of the impropriety of waiting till the polypus is excluded through the os externum, before we attempt to tie it; an opinion which some have entertained."

Sect. IV.—*Mode of Applying the Ligature for Polypi.*

We shall give Mr. Clarke's mode of applying the ligature, with our own experience upon this plan.

He directs, that previously to performing the operation, the rectum of the patient should be emptied by a clyster, or the intestinal canal may be cleared in its whole extent by a mild purgative. For a short time before the commencement of the operation the patient should be kept in the upright posture, that the neck of the tumour may be more within reach.

"As the tumour possesses different degrees of convexity in different cases, and as the distance of its neck from the os externum

is very various, the practitioner must be provided with two or three rods of different lengths, made of flexible metal, so as to be capable of being adapted to the shape of the tumour. The author's brother, the late Dr. Clarke, has contrived a brass rod, which, being received into a hollow handle, is capable of having its length altered as each case may require; and by this means the multiplication of instruments is rendered unnecessary.

"A silver cannula, of a length sufficient to reach from the neck of the tumour to the distance of an inch, or an inch and a half from the os externum, should be prepared; and near the extremity which is to hang out of the external parts, there should be placed two small shoulders, round which the ends of the ligature may be twisted. A sort of windlass has been recommended for this purpose in the cannula; but this is quite unnecessary, and renders the instrument more complicated.

"The ligature should be made of waxed silk, of such a thickness, as neither to cut the neck of the tumour, nor to break, nor block up the cannula.[1] In order to pass the ligature through the cannula, a long piece of thin brass wire should be ready. This is absolutely necessary; because, when the ligature becomes slippery and pliable, it will not be possible to push it through the cannula. The patient should be placed upon a bed. She should lie upon her left side, and her knees should be drawn up towards the abdomen. If the external parts should not be readily dilatable, they should be dilated. The forefinger of the practitioner's left hand, (previously oiled,) is now to be carried through the vagina to the neck of the tumour. The brass rod (previously prepared with the ligature, and its curvature adapted to the shape of the tumour,) is to be passed up by the right hand to that part of the neck of the tumour where the forefinger of the other hand is placed. The ligature is then to be secured by the finger, and the brass rod is to be carefully carried round the neck of the tumour, till it comes to that part where the ligature was secured. The practitioner is now to secure also under his finger that part of the ligature which has been carried round the neck of the

[1] We are convinced, from late experience, that a double silver cannula, rather longer than it is ordinarily made, armed with a piece of fine steel well annealed wire, is much the simplest and best instrument. We have tried the rods, but did not succeed in applying the ligature. We merely mention the fact, without undervaluing Mr. Clarke's instrument. The failure may have been owing to our own mal-adroitness rather than to the want of suitableness in the instrument itself. We, however, succeed without difficulty with the long silver double cannula. We think the following advantages attach to the cannula and wire. First, its whole powers are more at the command of the operator. Secondly, the loop can always be enlarged or diminished at pleasure. Thirdly, it can be more easily removed, or have its location changed, if this be necessary. Fourthly, any degree of pressure can be made, by a pair of pliers, that may be deemed expedient. Fifthly, the tumour is more completely strangled, and consequently, will be soon detached by ulceration. Sixthly, it requires but one instrument.

tumour, and the rod is to be carefully withdrawn. In some cases, it will be found more convenient to steady a part of the ligature with the rod, and to carry the other part of the ligature round the neck of the tumour with the finger. In doing this part of the operation, great care is to be taken not to include any part of the os uteri. Before the ligature is tightened, the patient is to be desired to inform the operator if she feels pain; because, if the tumour only is included in the ligature no pain will be felt.

"The two extremities of the ligature which hang out of the os externum are now to be drawn through the cannula, by the piece of wire, (which had been previously doubled, and carried through the cannula, so as to form a noose projecting from it,) and after the cannula has been gently passed up to the neck of the tumour, they are to be drawn tight, and are then to be twisted round the shoulders of the cannula, where they are to be made secure. The ligature, therefore, should be long enough to encircle the neck of the tumour, to be carried through the cannula, and a sufficient length of it should remain to be affixed to the shoulders of it. More than one ligature should always be prepared, lest that which is first used should become too slippery to be managed.

"After threading the eye of the rod, one extremity of the ligature is to be twisted once or twice round the instrument, whilst the other hangs loose. The patient should be made acquainted with the shape and situation of the instrument, that it may not be liable to be removed when she gets up to make water. She is also to be desired to remain constantly upon her side, and should not be allowed to move from one side to the other, unless when the practitioner is present. For want of attention to this caution, there is reason to believe that the cannula has been inadvertently pressed against, and its extremity pushed through, the uterus of the patient, so as to occasion her death. In the engraving given of the polypus cannula, there may be seen a contrivance, by means of which this accident may be prevented. The cannula is made of the same diameter from one end to the other, and a spiral screw is cut upon it. To this spiral screw is adapted another screw, placed in the centre of a kind of shield, which, (when the ligatures are fastened,) is to be placed in contact with the external parts. The shield in the plate is of a circular form; but in women who are corpulent, it may be more convenient that its shape should be oval.

"The patient is now to be left, and great care is to be taken by the nurse that the cannula is not moved when the contents of the bladder are expelled.

"Every day the practitioner is to examine the state of the ligature; and as often as it is found at all too slack, it is to be tightened. The mode of tightening it requires particular attention. If the cannula should happen to be long, the practitioner

should not hold the end of it whilst he tightens the ligature; lest with the force used, the ligature should cut through the neck of the tumour, and the other extremity of the cannula should be forcibly and suddenly pushed by the left hand against the internal parts of the woman. In order to avoid this accident, the cannula should be firmly held close to the external parts of the woman, which prevents the possibility of mischief being done. If the cannula with a ligature is employed, it is next to impossible that this accident should happen.

"A syringeful of warm water should be thrown into the vagina every day, when the ligature is tightened, in order to wash away the putrid discharge.

"The time at which the ligature will come away, will depend upon the thickness and firmness of the neck of the tumour, and the tightness with which the ligature is at first applied. The neck of the tumour sometimes is cut through in four days; sometimes ten or twelve days will elapse between the application of the ligature and the removal of the tumour, and occasionally the separation of the tumour will take up nearly three weeks, but this is an uncommon occurrence.

"The neck of the tumour being destroyed, the tumour itself is to be brought away by the practitioner. This will be accomplished in some cases with ease, by one or two fingers introduced into the vagina. If the polypus is large, or the external parts contracted, a single blade of a pair of midwife forceps may be used. If the size of the tumour should be such as not to be easily removed by these means, the crotchet may be fixed into it, and in this way it may be brought along. The palm of the hand should always be kept opposite to the beak of the instrument: so that if it should slip, the parts of the woman may not be injured by it.

"The cavity of the vagina should afterwards be cleansed, by injecting some tepid water, and this should be repeated during several days.

"The mucous and bloody discharge seldom continues long after the extraction of the polypus; but if any should remain after a week or ten days, some astringent injection should be thrown into the vagina three or four times a day.

"As the ligature is applied around the neck of the tumour, a part of the latter may remain between the ligature and the uterus. In consequence of the application of the ligature, this part putrefies, and comes away mixed with the discharges. In one case in which the author extracted a polypus from the uterus, he found that the os uteri had nearly recovered its natural size at the end of five days from the time at which the ligature came away; that at the end of fourteen days it was impossible to ascertain that

any disease had existed in the parts; and upon the sixteenth day, the patient menstruated.

"It has been recommended, after the application of the ligature, that the tumour should be cut off with a knife; but there does not appear to be any necessity for doing this, particularly as no harm arises to the patient from suffering it to remain till it falls off. Besides which, mischief might be done with a knife carried high into the vagina, and it is by no means certain that the tumour will not be more likely to return.

"It sometimes happens that the ligature and cannula fall out of the vagina when the practitioner is not with the patient; for which event she should be prepared, lest this occurrence should create alarm. Whenever this happens, it is obvious that the neck of the tumour is destroyed.

"The food of the patient should be simple, easy of digestion, and nutritious. If the bowels should be confined, a clyster of warm gruel may be thrown into the rectum. If the stomach should be irritable, a saline draught in a state of effervescence may be given, with a few drops of laudanum; and if the patient should complain of pain from long confinement to the same posture, a sufficient dose of opium should be taken to procure rest.

"The cause of debility being removed, the patient generally quickly recovers her strength; but as an auxiliary, a draught consisting of a decoction of bark, with sulphuric acid, may be taken three times a day."

Sect. V.—*Of the Cauliflower Excrescence.*

This is a disease of the uterus that the author has not seen. He has, in several instances, witnessed considerable discharges of a watery kind from the vagina, which he anticipated might be this disease; but upon examination per vaginam, they did not prove to be so; nor could the cause of such profuse discharges be accounted for: they all were relieved by astringent injections, the tincture of cantharides, the bals. copaiv., &c.[1]

[1] I lately witnessed a case of profuse and acrid discharge of water from the vagina, which resisted all the remedies I employed, and eventually terminated in death. The neck of the uterus, when examined per vaginam, was much thickened, tender, and opened so much as to permit the finger to pass. The whole uterine mass seemed to fill up the lower portion of the pelvis, and appeared to be attached to the whole of the surrounding parts, so firmly, as to be immovable in the pelvic cavity, by any force which could be applied by the finger. There was also a considerable hemorrhage from time to time; and when this was not present, the watery discharge was constant and copious. The patient appeared to sink from the profuseness of this discharge. She laboured under this complaint about six months. Leave could not be obtained to inspect the body.

There was not, at any time of her illness, any rising of the fundus above the pelvis; or, in other words, there was no distention of this organ, to lead to the suspicion that its cavity might be occupied by hydatids.

The late Dr. John Clarke, of London,[1] we believe, was the first who described this disease. In this country it must be extremely rare, or our experience, we think, would have furnished us with a case. It may almost be looked upon as among the incurable diseases of these parts, though considerable relief has been experienced, at different times, by the application of the ligature, &c.

This disease has taken its name from its strong resemblance to the cauliflower. "The surface is granulated, and it consists of a great number of small projections, which may be picked off from the surface, as the granules may be detached from the vegetable." Clarke, p. 59. The whole of this excrescence is covered by a membrane of an extremely fine texture: from the surface of which an aqueous fluid is poured in great quantity; and thus gives a particular character to this disease.

This tumour occupies, for a long time, the upper part of the vagina, as it is the product of the os uteri; it, however, gradually, nay, sometimes very rapidly, enlarges so much as to fill up the whole of the vaginal cavity; and occasionally even to protrude beyond the labia. This extension of the disease gives an opportunity to examine its texture, and to ascertain its colour.

Its texture is so extremely delicate as to be injured by the slightest violence; and when this has been done, a discharge of florid, arterial-looking blood, immediately follows; the quantity of which will be in proportion to the extent of lesion the tumour may have suffered.

The appearance of the tumour is of a bright flesh colour; giving evidence of great vascularity, with very little solidity of structure.

This tumour possesses no sensibility, and is one of the rare instances of great vascularity being unaccompanied by exalted feeling.

In no instance is the structure of the vagina involved, so far as observation has yet extended. It may originate from the whole circle of the os uteri, or only from a portion of it: hitherto it has never been traced within the uterus.

Mr. Clarke thinks the growth of this excrescence is in some measure influenced by the capacity of the vagina; increasing more rapidly in capacious than in restricted vaginæ. Hence in married women who have borne many children, the tumour increases very rapidly; and, on the contrary, "the pressure of the sides of a less capacious vagina, as in single women, will greatly tend to control its enlargement, acting like a bandage." —Clarke, p. 61.

[1] See his paper, in Transactions of the Society for the Improvement of Medical Knowledge, 1812.

It would seem that the enlargement of the tumour, at least, when it is so large as to protrude beyond the labia, occasions inconvenience by its mechanical pressure; as the parts immediately in contact with it will not unfrequently ulcerate.

It is not ascertained what gives rise to this disease; conjecture even seems at bay. The mechanical violences of labour, are altogether insufficient to account for its production; for "married women, who have never been pregnant; nay, single women, are liable to the complaint, in whom no violence can have been offered to the os uteri," p. 62.

"It cannot be traced to any syphilitic cause. The common prostitutes of this metropolis, (London,) are by no means more liable to it, than any similar number of women in different stations of life. The disease as often arises in the strong and robust as in the weak; in persons who live in the country, as those who inhabit large towns; in those whose situation in life obliges them to labour, as well as in those who, from their rank in society, sometimes consider themselves privileged members of it.

"No period of life, after the age of twenty, seems to be exempt from the disease. The author has known it fatal at the age of twenty; and he has met with the disease at different periods of life up to old age."—Clarke, p. 62.

We have noticed above, that the blood which escapes from the tumour, when it has been injured, has the marks of arterial blood; indeed this excrescence seems to be but a mass or congeries of arteries and veins.

A very remarkable circumstance attends this disease; namely, its disappearance after death. Mr. Clarke declares, "No one has seen a tumour, resembling a cauliflower excrescence, in the dead body," p. 63. It seems that so soon as life ceases, the whole tumour shrinks, and leaves nothing which resembles itself. All that can be perceived of the former tumour, however large it may have been, is "a soft, flaccid, slimy, whitish substance, resembling the fœtal portion of the placenta of a calf, after it has been macerated in water," p. 66.

Notwithstanding the extremely vascular nature of this excrescence, it has hitherto resisted every attempt to inject it; and, "though the uterine vessels were abundantly filled with the injection, the fluid escaped from its surface as fast as it was thrown in from the pipe of the injecting syringe.

Many attempts have been made by different practitioners to procure a specimen of this disease; but all had failed, until Mr. Clarke was fortunate enough to remove one of these tumours on the third day after the application of a ligature. So soon as it was relieved from the vagina, it was put into alcohol: it was from this specimen that his beautiful drawing and engraving were made. See plate IX.

Sect. VI.—*Of the Symptoms of this Complaint.*

This complaint begins by an aqueous discharge from the vagina: this is but little attended to in the beginning; nor, indeed, until the quantity rendered obliges the woman to protect herself against its excess. But as this profusion is not attended with either pain or stench, she neglects herself, until her health yields to this undermining disease. As a general rule the quantity of watery discharge is in proportion to the surface of the tumour.

The water evacuated in this way may be altogether transparent or colourless, or only occasionally tinged with red, upon the yielding of a small vessel: the quantity of water may be so small as not to create any great inconvenience, or it may be so excessive as to require constant attention. Sexual intercourse is always followed by a discharge of blood; even common exertions may be succeeded by a similar hemorrhage. Thus, coughing, sneezing, or straining at stool, will sometimes be followed by a great loss.

The watery discharge diminishes in proportion as the sanguineous increases. From these multiplied discharges the system becomes very much debilitated, and the body wastes, but not to great emaciation; the stomach becomes dyspeptic, and the belly tympanitic. Hysterical and nervous symptoms supervene, to aggravate the distresses of the already oppressed patient.

Effusions now take place, and both local and general dropsy but too certainly follow. Sometimes the sufferings of the patient have an unexpected and fatal termination, from the profuseness of the hemorrhage which may have suddenly assailed her.

Sect. VII.—*Of the Prognosis.*

Mr. Clarke is of opinion that the tonicity of the vagina will have a decided influence upon the progress of this complaint; which must consequently influence the prognosis. He says, "As the enlargement of vessels in other situations is much influenced by pressure, so it will be found that the compression of the sides of the vagina will greatly retard the growth of this tumour. Now, as the quantity of the watery discharge depends upon the extent of surface the tumour presents, and as the danger of the patient is in proportion to the quantity of the discharge, it follows that whenever the vagina has lost its tone, and the tumour has thereby been little subject to compression, the prognostic to be given to the friends of the patient, as to the probable

duration of life, should be less favourable than when the sides of the tumour are supported by the sides of a more contracted canal. Added to this, the very pressure of a contracted vagina is an evidence that the constitution still possesses a considerable degree of vigour: so that the capacity of the vagina, in this instance, as well as in many others, is by no means a bad criterion of the strength remaining in the constitution.

"When the tumour occupies only a small part of the os uteri, the opinion to be given should be more favourable, than when the whole circumference of the opening is involved in the disease." "The symptoms, in some cases of the disease, are diminished more easily than others; of which circumstance no knowledge can be obtained until the experiment has been made; the greater the effect, therefore, which local remedies produce in controlling the discharge, the longer will the disease continue, cæteris paribus, without destroying life."

Sect. VIII.—*Treatment of the Cauliflower Excrescence.*

This disease, like some others of the uterus, if let alone, never cures itself. The debilitating nature of the discharges with which this complaint is always attended, will soon exhaust the woman that may be the subject of them—the watery from the excess of its quantity, and the sanguineous from the importance of its quality, though it may not be profuse. Unfortunately, this complaint, in its commencement, does not excite as much alarm as its mischievous tendency should create. It were desirable that females should be better acquainted with the symptoms which forerun and accompany many of the dangerous diseases to which they are unavoidably liable, were it always safe to communicate to them such information. But, unfortunately, the imagination exerts such influence over the happiness of mankind, as to render it extremely doubtful, whether more would not be lost than gained by such knowledge: it must, therefore, be left to contingent discovery for the present, as it has been heretofore.

From the nature of the formation, or rather organization, of this species of tumour, it is evident that its extension or diminution will very much depend upon the state of the circulating system both as regards its excitement, and its quantity of blood: and experience appears to have proved that nothing keeps it in subjection like controlling the force of the arterial system; and nothing is so effectual to this end, as lessening the quantity of blood; directly, by bleeding; and preventing its accumulation by a well-regulated diet.

Blood may be abstracted from the arm by the lancet; or it

may be taken by cups, or by leeching, from about the sacrum or thighs: this will diminish the quantity of blood immediately present, and will afford relief. But this benefit will be transient, if new accumulations be not prevented, by severely restricting the patient to a very bland and unnutritious diet. The articles of diet must be not only void of stimulus, but should also be but little nourishing. If this be not attended to, no good can result from the abstraction of blood; on the contrary, it may be even injurious, as the excitability of the system is increased by the loss of it.

Mr. Clarke appears to prefer local to general bleeding. He also prefers cupping, to the application of leeches; but without assigning any reason for the preference: we cannot see why either would not do.

Mr. Clarke says, "The diet should be of the mildest kind, such as puddings, white fish, and vegetables." In this country, we should look upon "puddings and white fish," as very substantial fare; and would be far from the articles we should select as proper for a woman in this situation. Were we to direct upon such an occasion, we would confine the patient to black tea, thin coffee, and stale bread, for the meals of morning and evening; and vegetables alone for dinner. These may consist of rice, the potato, the turnip, the parsnip, the carrot, the tomato, and the ripe fruits of the season.

We might permit a little variety, by allowing rennet-whey, butter-milk, baked or roasted apples, thin vegetable jellies, as that of the tapioca, rice, or arrow root. Her drink should absolutely be water, barley water, molasses and water, toast water, or thin flaxseed tea.

A recumbent posture must also be insisted on, or but little advantage will be derived from the attempts made to reduce the force of the circulation. But it should be remembered, that it is not a matter of indifference on what the patient reposes; it should be either a good elastic mattress, a sacking bottom, or a sofa. A feather bed would be directly injurious, by maintaining too much warmth about the pelvis. And Mr. Clarke insists, that, "if the patient be married, she should be separated from her husband's bed; to which she should never return."

An unceasing attention should be paid to the state of the bowels; a loose stool should be procured daily. When this can be effected by diet, it is always best it should be. For this purpose, the bread which the patient eats should be made of unbolted wheat flour; or this may be made into mush, and eaten with molasses. Indian meal gruel, sweetened with molasses, has also a favourable effect upon the bowels.

But should these be found insufficient for the purpose, the patient may chew daily a little of the root of rhubarb; or take equal

parts of cremor tartar and the flower of brimstone, made into an electuary by molasses. The lenitive electuary alone, or a little increased in power, if necessary, by a small addition of powdered jalap, is oftentimes very effectual. Equal parts of calcined magnesia, and the flower of brimstone, is a very certain laxative. The solution of the sulphate of magnesia, in small doses, taken before breakfast, is also very certain. At all events, costiveness must be avoided. Should it, however, accidentally occur, it should be removed in the most gentle manner; for the strong efforts of the abdomen must be avoided. This will be best done by very mild injections, such as warm molasses and water, thin soap suds making the quantity such as will ensure their operation, rather by their bulk than their stimulus.

Mr. Clarke speaks in high terms of cold applied to the outside of the pelvis; and by injections of cold fluids within the vagina. The former to be applied by sponges, and the latter by the female syringe: these to be repeated twice each twenty-four hours.

With a view to diminish the size of the tumour, Mr. Clarke recommends astringent applications. For this purpose, he advises the sulphate of zinc, in the proportion of four or five grains to the ounce of water; or alum, in the proportion of ten or twelve grains, with a little of the mucilage of gum Arabic; or alum and the tincture of kino, as follows:—

℞. Infus. lini, ℥xv.
Aluminis, ʒij.
Tinct. kino, ℥j.—M.

Or,

℞. Cupri sulphat. grs. x.
Aquæ Flor. samb.
Mist. camphoræ, ℥vj.—M.

He gives several other formulæ, much of the same character, but we think of no more efficacy. He suggests, with much propriety, the necessity of great care in throwing up these injections into the vagina, lest the extremity of the pipe should break a portion of the tumour, and occasion a bleeding. The round-headed pewter female syringe is the best for this purpose; and even this should be introduced but a little way beyond the os externum.

If the tumour has so far increased as to appear at the os externum, or just within the labia, it is advised, that the astringent fluids should be used by means of a common earthen butter boat; the woman having her hips elevated during the operation. And when the tumour has actually protruded, Mr. Clarke directs "compresses dipped in an astringent fluid to be applied to it; or the surface may be lightly touched with a soft sponge wetted with it," p. 98.

As this complaint is sure, sooner or later, to be attended by great debility, the woman should be supported by tonics when this occurs. The sulphuric and muriatic acids are recommended for this purpose, with the infusion of orange peel, or of rose leaves, with great confidence, and, we believe, justly: at least we think they agree better than any other tonics we have tried, in wasting diseases.

Bark in decoction, is also a favourite remedy with most practitioners, but it is sometimes difficult to restrain its effects on the bowels. The sulphate of quinine has not the same tendency to pass through the bowels, as the bark, in substance or in decoction; it, therefore, merits the preference. The decoction of the cascarilla, (cortex eleuth.) has an admirable effect sometimes, where the bark is indicated but cannot be used.

Of the general plan of treatment now laid down, Mr. Clarke speaks in the following terms. "The author is justified in repeating that, by a strict attention to, and compliance with, the rules above suggested, nearly every case of this disease may be made tolerable; and, perhaps, such a change wrought in the size or the actions of the excrescence, in a few instances, as to remove all the symptoms," p. 104. He confirms these hopes by the recital of several successful cases.

The ligature, however, he considers as an important auxiliary. It is to be applied as recommended for the polypus of the uterus. He declares, however, that more care is necessary in its application in the one case than in the other; the cauliflower excrescence being so very liable to bleed, when any violence is offered it. The shield recommended for the polypus is not so necessary in the cauliflower excrescence, as the tumour will be cut through in a much shorter time. The objection to the use of the shield in this operation is the possibility that the weight of it may tear through the tumour before the blood has coagulated in the vessels above.

"After the removal of the disease, (tumour,) it is recommended that the vagina should be washed out with cold water, and that a solution of alum, in a strong decoction of oak bark, should be thrown into the vagina twice or three times a day, and the external orifice blocked up with a dossil of lint, so as to prevent the too sudden escape of the fluid.

"A weak solution of the nitrate of silver, or of the sulphate of copper may be preferable, in some instances, to any other injection: it may be used in the following proportions:—

℞. Argenti nitrat.	grs. xij.
Aq. distillat.	℥xij. f. sol.
Or,	
℞. Cupri sulphat.	grs. xviij.
Aquæ rosæ,	℥xij. f. sol."

A piece of lint, wetted with either of these solutions, may be introduced, and placed against the diseased portion of the os uteri. "By such means, a slight inflammation may be excited in the blood vessels, so as to produce a consolidation of the parts diseased; and thus the regeneration of the tumour may be more tardy.

"However favourable appearances may be in that part of the uterus which can be examined by the finger, there may exist out of reach, and consequently without the knowledge of the practitioner, morbid changes of structure, which may, of themselves, prove fatal," p. 112.

We have chosen to quote the opinions of Mr. Clarke upon the subject before us pretty much at large, as his experience qualifies him to give directions for the management of this disease, which our entire ignorance would not justify. The high standing of this gentleman, as a successful practitioner, adds much value to his practical directions, and what enhances these opinions still more is, that they are altogether free from learned parade without elucidation; and of ingenious speculations without practical improvement.

Sect. IX.—*Of Hydatids of the Uterus.*

By hydatids is understood a congeries of vesicles of various sizes, containing a transparent lymph; attached to the internal face of the uterus, and with each other, by filamentous footstalks, much resembling a bunch of grapes. These vesicles differ in size, from the smallness of a pin's head, to the size of a walnut. They are looked upon as animals of extremely simple organization, and functions.[1] Of their origin we know nothing, and

[1] This disease has been long known to physicians; for it is said that Ætius has distinctly alluded to it, yet the cause, and the precise nature of the product, is still unsettled. Valesneri looked upon this product as an enlargement of globules or pouches, which he says he has discovered by the microscope to belong to the lymphatic vessels of the placenta, chorion and amnios, as a natural arrangement; but which, from some morbid cause, have enlarged themselves. Desormeaux, aided by the microscopical observations of Velpeau,(*a*) has taken nearly the same view of the subject as Valesneri; while Percy looks upon them as animals, and to be the tænia hydatigena of Pallas, and declares(*b*) that he has seen them move, when exposed to the action of salt and vinegar. While Madame Boivin(*c*) reverts to the old doctrine, that the vesicular mole, as she terms it, does not consist of hydatids, but is bona fide a degeneration of the impregnated ovum. For she declares that this vesicular cluster is covered by a membranous expan-

(*a*) Nouvelles Recherches, sur l'orgine, &c.
(*b*) Dict. de Médecine, Art. Œuf. Vol XV.
(*c*) Corvisart, Journ. de Médecine. XXII. 197.

almost as little of their habits. Nor do we know how many species there may be of them, as several are sometimes found in the same animal. A large hydatid has several small ones attached to it, by small filamentary processes.

These animals sometimes increase with great rapidity; and when their seat is in the cavity of the uterus, they distend it in proportion as they acquire size, or increase in number.

The symptoms of this disease resemble very much those of incipient pregnancy—after awhile the uterus enlarges, sometimes more, and at other times less rapidly, and may be felt in the hypogastrium—swelling of the mammæ most generally, together with the formation of a fluid, which may be discharged by the nipples—and areolæ, as in true pregnancy—sometimes an alternate discharge from the vagina, of serum or blood; and the absence of a solid body immersed in a fluid, as takes place in pregnancy, when the woman is examined by the touch. This last sign, when united with the rational signs of pregnancy, Madame Boivin considers as highly characteristic of the disease. And after the expulsion of this body, lochia follow, the breasts swell, and milk is secreted.

The cause of the disease under consideration has never been discovered. These animals sometimes attack the external covering of the ovum, and thus produce abortion.[1] See note below.

It is not, however, ascertained that pregnancy is always necessary for their production.[2] Indeed, in the only case we ever witnessed of this disease, it certainly was not immediately so, if reliance can be placed upon the general good character of the patient. The patient was more than thirty years of age, and had been a widow upwards of three years, when she was attacked with hydatids of the uterus.

She observed herself to swell gradually, and also to decline in health; her menses were arrested, and her lower extremities

sion which is divisible into two laminæ—one of which resembles the epichorion or decidua reflexa, while the other differs in nothing from the amnios.

[1] A case of this kind, with a drawing of the ovum, has been kindly furnished me by Dr. Atlee of this place, accompanied by the following account of it.

"The above is a rough drawing of an *ovum* beset with *hydatids*, which was expelled from the uterus of a particular friend, aged about forty-five years, who had had slight floodings every day, at intervals, for one month, unattended with pain; at the expiration of which time, labour pains came on, and the ovum soon escaped. The rationale of the case I have supposed to be thus: the hydatids forming and increasing gradually, separated by degrees the ovum from the parietes of the uterus, at each renewed separation causing hemorrhage, and soon the death of the embryo, which, on cutting into the ovum, was let out, in appearance like pus. The hydatids contained pure lymph." See Plate VIII.

[2] Mdme. Boivin and some others, think that impregnation is essential to the production of the uterine hydatid. Ruysch thought that a retained placenta would give rise to hydatids.

were swollen. Her friends suspected she was pregnant; and when she was attacked with periodical pains, they were certain their conjectures were well founded: at this time we were sent for. Before our arrival, however, the uterus had relieved itself by expelling nearly a chamber-potful of hydatids; at least so we supposed them to be; for they had been thrown out unfortunately before we came.[1] They said what came from her was like a very large bunch of grapes of different sizes; from the size of a currant to that of a large fox grape.

When we arrived, we found the woman very much exhausted by the discharge of blood, and which was still flowing in an alarming degree. This was, however, arrested by frictions upon the abdomen, ice, and large doses of the acetate of lead and opium. In the course of two years she had several attacks of this kind, each of which was less severe than the former; and at last they seemed to cease spontaneously, and the woman recovered her health, without any thing particular having been done for her, except sea-bathing for a whole season.

As connected with medical jurisprudence, it would be of the highest importance to determine whether impregnation be a sine qua non to the production of hydatids—but whether this will ever be satisfactorily determined, must be left to contingency, as neither reasoning, nor experiment, can well decide the question. We would, however, suggest, that as the opinion of Madame Boivin rests upon assumption, as well as that of Percy, a jury should incline to the side of mercy, when a question of this kind is agitated. We therefore altogether applaud the decision of Percy, who acquitted a young *religieuse* of incontinence, by declaring, that vesicular moles are merely hydatids, though she would perhaps have been condemned by Madame Boivin, had the appeal been made to her. We therefore look upon the hypothesis of this lady, if adopted in its full extent, to be highly dangerous, and must remain so, unless her opinion be unequivocally proved—but, fortunately, hydatids is a rare disease, and cannot often compromit character or life.

In consequence of the delicacy of the covering of the hydatid, it is easily destroyed by pressure, or any concussatory motion of the abdominal muscles or uterus: hence they frequently burst, and give rise to a discharge of a pale transparent fluid, without odour or tenacity. And this circumstance may be said to be the only one which characterizes this complaint; for every other attending symptom is so common to many other affections of the uterus, that they would not serve to distinguish it. The greater part of the inconvenience of this complaint arises, as in preg-

[1] "They are known to have remained in utero longer than other kinds of moles. Dugès relates a case where 15 pounds weight of hydatids were discharged, which had been five or six years accumulating."

nancy, from the pressure of the distended uterus upon the surrounding parts: hence we sometimes have cramps of the lower extremities, œdematous swellings of them, retention of urine, &c., as in a genuine pregnancy. I cannot find, in any memoranda of the cases just related, any notice taken of the condition of the mammæ from this diseased occupation of the uterus.

This disease may be known from the cauliflower excrescence, by the *occasional* discharge of a watery fluid, and this in different quantities at different times; whereas, in the latter disease, the quantity of fluid discharged is much greater, and more *constant*. As regards the sensible qualities of each, they perhaps resemble each other pretty strictly; but we know of no experiments to determine their chemical resemblances or discrepancies.[1]

No remedy has hitherto been discovered for the relief of this complaint. The patient is not to be led to expect any great benefit from art; at least in the progress or in the interval of the disease. All it can do is to afford a degree of relief by aiding in a species of labour, which will sooner or later take place, from the distention of the uterus.

Percy declares that after the discharge of vesicles had commenced, he found great advantage from injecting a solution of salt in vinegar into the uterus. He declares this was followed by a rustling noise in the pelvis, occasioned, as he supposes, by the agitation into which the hydatids were thrown by this unusual stimulus. On this point Mdme. Boivin declares her fear of either its utility or its safety, as in one of her own patients threatening symptoms of inflammation after its employment ensued; and in another, it was of no advantage. She considers gentle titillation at the os uteri with the finger, stimulating injections per anum, frictions upon the hypogastrium, and the application of cold to the lower part of the trunk, to be more efficacious and safe. Injections into the uterus, of a stimulating kind, are useful, she says, when it does not contract, or if the hemorrhage continues after it has contracted. But we are of opinion that the "ergot,"[2] as will be recommended presently, would supersede all these remedies.

Mr. Clarke declares, "When this period arrives, at which the uterus is striving to unload itself of its contents, then all the skill and energy of the practitioner will be wanting, and all his efforts will be called forth to control the hemorrhage, and to sustain the powers of the constitution. With this view, the patient should

[1] "They contain a fluid, which, in the smaller ones, is transparent, and in the larger ones I have seen them of a beautiful pink. It is less dense than distilled water; does not burn vegetable blue, red; it is not coagulable in either heat or acids."—Nauche.

[2] We believe we were the first to recommend the "ergot" in these cases.

be kept perfectly still, in a horizontal posture: she should not be allowed to take any stimulating food or drink. Cold applications to the loins, abdomen, and external organs," &c. Treating it as any other case of uterine hemorrhage, by promoting, by every possible means, the contraction of the uterus. "Should any portions of the hydatid remain, and if the hemorrhage should continue profuse, an attempt should be made to remove these, in order to produce complete contraction of the muscular fibres." Vol. I. p. 120.

This is to be done by introducing the hand, well lubricated, into the cavity of the uterus, and carefully detaching the adhering portions of the hydatids, and bringing them out with the hand. It will be perceived, that this direction cannot be complied with in all instances; for in all instances, the uterus will not be sufficiently distended by the hydatids to permit the passing of the hand with ease; and violence must never be employed in this, or any other instance, in passing the hand into the cavity of the uterus.

We would propose, and we think with a fair prospect of success, the free use of the secale cornutum in this complaint, to procure the expulsion of the hydatids; especially in such cases as would not easily admit the hand, or where the contractions of the uterus were too feeble, or insufficient for their extrusion.

So far as analogy and reasoning upon a subject will justify the employment of a novel remedy, we have them on our side; for it is certain that the union of hydatids with the uterus is not more strict than the ordinary connexion of the placenta with that body; and we know, from experience, that this connexion may be destroyed, most fortunately, sometimes, by this very peculiar and interesting drug. As regards ourselves, we shall not hesitate a moment to employ it.

Since writing the above, I have been favoured with a letter from Mr. Anderson, of Hagerstown, Maryland, giving an account of the "ergot" in this complaint, which I shall have much pleasure in detailing. The trial of this substance was made by Dr. W. D. Macgill, of the above named place.

"Early last spring, Dr. M. was called to see Mrs. W., aged forty years, who had previously enjoyed good health, and had been the mother of several children. She was labouring under a very painful affection of the womb, accompanied with periodical hemorrhagy, occurring once in twenty-four hours, usually in the evening, attended by febrile symptoms, and much disturbance of the digestive functions, and which was evidently making rapid inroads upon her constitution. During its farther continuance, her stomach became exceedingly irritable, so much so, indeed, as scarcely to retain nourishment of any description. Dr. M. addressed his remedies principally to the restraining of the hemor-

rhagy, and obviating the excessive weakness of the stomach. But notwithstanding, the symptoms continued to increase in violence, so much as to endanger the life of the patient. She had become very much exhausted by the repeated loss of blood, an inability to take food, (for she had now suffered for more than three months,) when the doctor made an examination per vaginam, (after having made them frequently before without any satisfactory result,) and discovered something protruding through the os uteri, which he extracted, and found that the poor woman was labouring under hydatids of the womb. He immediately sent for the ergot, judging from analogy that it would prove decidedly effectual in producing an expulsion of the heterogeneous mass. The event proved that he was not mistaken in his conjecture; for he had given the ergot but a very few minutes, when it began to show its specific operation upon the uterus, and succeeded in a complete evacuation of its contents. The mass of hydatids equalled in size the head of a large child at birth, and afforded a very good specimen of the disease, a part of which we have made a preparation of. The representation in your book on the 'Diseases of Women,' is admirable. The floodings immediately ceased, and did not return. The woman rapidly recovered, until at length she attained her former health and vigour, and I believe is again pregnant. She says her mother died of a disease exactly similar."

"P. S.—Dr. Macgill had not heard of your suggestion until after the delivery. He was led to the employment of the ergot solely from analogy."

It seems, however, that the progress of gestation is not always interrupted by the presence of hydatids, as the following case proves.

"Mad. Hec—, aged forty years, had been plunged in misery and distress, from her own bad conduct, for some years. She was subject to attacks of lipothymia after eating. For four months the menses had been wanting, and it was supposed that she was pregnant. Dr. T. examined, but could not decide on this point. The woman herself, who had borne nine children, did not consider it as pregnancy. She believed, from the vomiting after food, that she laboured under scirrhus of the stomach, of which complaint her mother had died. Low diet and diluents were prescribed. There was now developed much irritation about the uterus, and leeches were applied to the groin and vagina. The irritation was removed. The stomach complaint was now much relieved. A month or more after this, our author was hastily summoned to Madame H., who was said to be in labour. The uterus was now much larger than when last examined, and seemed to fill the pelvis. There were bearing-down pains, and in these the uterus felt very turgid. The os uteri, however,

was close, and no discharge from thence. The pains persisted without any alteration in the cervix or os uteri. This state continued three days more, when it was perceived that at each bearing-down pain there was some discharge of clear water. This was followed, some days afterwards, by a large number of hydatids, of various sizes, from an inch in diameter downwards. She continued to pass these bodies for fifteen days. In the mean time the size of the uterus rapidly increased, and rose out of the pelvis. It was now ascertained that there was a fœtus in utero, and yet the hydatids were discharged daily in considerable quantities.[1] Three or four months after this she was delivered of a child at the full term, the hydatids having never ceased one day to be discharged. There were one hundred and forty-eight of these bodies collected, and the number broken and unobserved could not be estimated. The patient recovered, and did well. She has since become pregnant."

We will give another case of this rare and interesting affection; as all that we can learn of a disease so uncommon and so important, will fall short, perhaps, of being sufficient to establish its diagnosis, and best mode of treatment. In the case following, we are disposed to believe, that had "ergot" been duly administered, it would have been more prompt in its action, and less equivocal in its safety, than the one pursued—it, however, terminated well.

A woman, after being six times pregnant, imagined herself with child for the seventh time, in consequence of the cessation of the catamenia. Soon afterwards she was attacked with incessant vomiting, the abdomen increased rapidly in size, and became tender to the touch; the legs also became œdematous and the breathing short. These symptoms, however, she conceived to arise from twins, and she did not apply for medical assistance. In the fifth month of the supposed pregnancy the swelling of the belly became rapidly enormous, the œdema extended over the trunk, and her respiration became very difficult, when, at length, labour-pains suddenly set in, and considerable hemorrhage ensued, which was at first checked by cold applications, but soon afterwards returned more violently. At the same time a large mass of hydatids, as big as two fists, was discharged. The accoucheur, who now saw her for the first time, found her pale, fainting, without pulsation at the wrist, and breathing slowly and laboriously. The fundus uteri was a hand's breath above the navel, and the tumour formed by the womb was regular, not elongated or lying to one side, as is usually the case in this disease. The os uteri was dilated to the size of a half dollar, and

[1] Does this case seem to prove, that hydatids do not depend upon a diseased ovum, as suggested by Madame Boivin?

was very tender to the touch. Masses of hydatids projected from it into the vagina; and there was constant hemorrhage. The treatment adopted in these circumstances consisted in the administration of tincture of castor every fifteen minutes, spirituous frictions of the abdomen, and the injection into the uterus of a solution of salt acidulated with vinegar. In consequence the labour pains, which had almost ceased, were speedily renewed, and rapidly increased in strength; masses of hydatids were at the same time discharged; and, ere long the hemorrhage abated considerably. In the course of two hours the fundus uteri had descended to within a hand's breadth above the pubis; in the course of the day it had descended still lower; the hemorrhage ceased; a warm perspiration broke out, accompanied with rising of the pulse, and the patient soon recovered. Milk appeared in the breasts on the third day, but receded again without any bad consequence. The hydatids weighed six pounds. They were attached to the remains of a *membrana decidua*."

Sect. X.—*Of Irritable Uterus.*

By the "irritable uterus" we are to understand a peculiar and permanent sensibility of this organ, but more especially of its neck, which attacks the female about the middle period of life, or a little beyond it; rarely showing itself before the five and twentieth year, and, perhaps, still less frequently after the menstrual periods have passed. Dr. Gooch,[1] who has devoted an excellent chapter to this subject, and was, as far as we know, the first author who treated of it, defines this disease to be "a painful and tender state of the uterus, neither attended by, nor tending to produce change in its structure." The latter part of this definition we do not think exactly correct, as we have always found some change in this part.

This morbid condition of the uterus shows itself by both general and local disturbances.

Of the General Symptoms.—The general symptoms are, an increased frequency, and a preternatural firmness of pulse.[2] This frequency is commonly augmented towards evening; the skin then becomes warmer, and the cheeks are reddened by a slight hectic blush. But the pulse is *always* more frequent and corded than natural, even in the absence of the exacerbation, but least so early in the morning. We have never observed any thing like a regular rigour attend this complaint, though we have often

[1] In his work, entitled "An Account of some of the most important Diseases peculiar to Women, by Robert Gooch, M. D."

[2] Dr. Gooch says, "The pulse is soft, and not much quicker than natural, but is easily quickened by the slightest emotion," p. 313.

heard the patient complain of chilliness, before an exacerbation of pain, especially if this were about to prove violent.

The tongue is paler and whiter than natural, especially early in the morning; towards evening it reddens and becomes cleaner; more or less thirst attends, particularly in the after part of the day. The natural perceptions of the tongue are frequently perverted; so much so, sometimes, as to lead the patient to the belief that there is a hair upon it; some say that the mouth feels as if there was dry flour in it; while others declare the sensation resembles that of grease, &c.

Headach almost always attends, and it is generally the back part of the head that suffers: this, for the most part, increases as the day advances, or as the pulse increases in force and frequency.

The skin is always dry while the disease remains in full force; and its general temperature is increased, if we except that of the hands and feet, which is much below the natural standard, especially the latter: we have rarely known the febrile exacerbation terminate in sweat.

The stomach is almost sure to suffer if the disease continue for a long time obstinate, though we have occasionally known it not to be implicated in the general mischief—but the latter circumstance may be looked upon rather as an exception to the rule; as, for the most part, the appetite is impaired or very capricious, and eventually dyspepsia becomes established. The bowels are either too much confined, or are urged to diarrhœa; and if an attempt be made to remove the former condition by purgative remedies, the latter is certain to follow, by which every local symptom is severely augmented; and thus the patient suffers almost alike, from either of these conditions.

The urine, for the most part, is sparing, high-coloured, strong-smelling, and throws down, when at rest, a large deposit—or it is pale, abundant, and free from deposition; but when this occurs, we have reason to suspect the disease is complicated with a certain form of neuralgia. The urine is generally discharged with some difficulty, and even pain is felt along the course of the urethra. Occasionally, the urine is suppressed or retained for many hours together, and is then voided with considerable suffering.

Local Symptoms.—Sometimes the patient represents the parts as being a little swelled: but this we believe is always transient. Walking, riding, or indeed any kind of exertion, is sure to be accompanied or followed by severe lancinating pains within the pelvic cavity, especially from near, or in the course of, the urethra, to about the centre of the sacrum; and when the severity of the pain has abated, it subsides into a permanent dull pain in the same direction, but more diffused.

More or less leucorrhœa pretty certainly attends; the colour of which varies almost in proportion to the degree of suffering; when this is not very intense, it is thin and nearly transparent, pretty abundant, and without odour; while, on the contrary, when the pain is very severe and permanent, the discharge is thick, purulent, and is, if strict regard be not paid to cleanliness, offensive.

The uterus is almost always lower in the vagina than natural, and sometimes, indeed not unfrequently, it is found prolapsed.[1] There is considerable heat in the vagina, and always, so far as we have observed, a more than ordinary degree of sensibility in its parietes. In this we differ from the respectable authority of Dr. Gooch, who says this tenderness is confined to the neck of the uterus.[2] The neck is almost always a little shortened, enlarged, and exquisitely sensible to the touch, and the os tincæ is rather more closed than natural. The pain which attends this complaint is always increased by an erect position, and it as certainly abates by a recumbent one. Pain is usually felt immediately behind the mons veneris and brim of the pelvis, especially its anterior portion.

The sensibility of the neck of the uterus is at times so exquisitely great, that the woman shrieks if it be rather rudely touched; nor does this pain cease, even for a very long time after it has been excited, especially at the lower part of the sacrum. Dr. Gooch tells us, that in a patient of his, it would remain for many hours, with great severity. Indeed, this tenderness is so great and so constant, in many instances, that great suffering is experienced if the patient incautiously sit down too suddenly, and particularly if upon a hard, unresisting seat; and the privileges of matrimony cannot be consummated without much suffering.

Besides these local inconveniences, there is a symptom which is almost constantly present, and which seems, according to our experience, in an especial manner to characterize the "irritable uterus," but which is not noticed by either Dr. Gooch,[3] or Dr. Addison,[4] or M. Genest:[5] this is a pulsating, throbbing, or fluttering sensation within the vagina or pelvic cavity. So far, we have never known this symptom wanting in this affection, though it differs very much in degree. In some few instances we have known it to interrupt sleep; but this is not the usual state of this symptom, though it is represented to be very disagreeable always. This sensation, however, is not constant; it often suffers

[1] By prolapsus, we would wish to be understood, such a descent of the uterus as causes it to rest upon the internal face of the perineum.

[2] Dr. Gooch says, "The finger can be introduced into the vagina, and be pressed against its sides, without producing uneasiness," p. 312.

[3] Opera Citata.

[4] "Observations upon Diseases of Females."

[5] Recherches sur l'Hysteralgie ou Neuralgie Uterine, et son Traitement. Gazette Med. de Paris, Sept. 1830.

abatement, and occasionally is absent—but when present, it marks the irritable uterus in an especial manner.

Dr. Gooch and Dr. Addison, in their descriptions of the "irritable uterus," have added many symptoms that do not belong to this affection when simple and uncomplicated. To be convinced of this, it will only be necessary to compare the symptoms we have detailed above, with those enumerated by these gentlemen. Dr. A. lays down the following marks, as belonging to, or produced by, "uterine irritation." He declares the most frequent symptoms of this condition to be—

"Irregular menstruation, the discharge being preceded or accompanied by pain in the back, loins, thighs, or in the region of the uterus itself, attended with forcing or bearing down; the discharge being in excess, either in point of mere quantity, in continuance, or in recurrence; tenderness of the womb itself, upon pressure made either externally or per vaginam; a tenderness so great as to interfere with the privileges of matrimony, and, lastly, leucorrhœa. The most frequent symptoms, however, are, unquestionably, painful menstruation and leucorrhœal discharge. Such are the few plain, simple indications of a state of the uterus which is repeatedly overlooked, though productive of the most serious disturbance, both of the general health, and of particular organs; disturbance which, when once produced, stamps a character upon the general and local ailments of the sufferer, strongly indicative, to the experienced man, of uterine irritation: a character which confirms us in the belief that it is from such irritation that the evil originates, and that it is to correct the condition of the uterine system that his chief attention is to be directed," p. 12.

In addition to these symptoms, Dr. A. enumerates a long train of nervous symptoms as belonging to this affection—in a word, he describes a well confirmed hysteria. Indeed, the description given by Dr. A. and that given by us, do not agree in a sufficient number of important points, to induce us to believe we are describing one and the same disease.

First. The greater part of the symptoms enumerated by Dr A. is descriptive of simple dysmenorrhœa.

Second. He makes the cause of "uterine irritation" consist in "irregular menstruation;"[1] whereas, we are of opinion that

[1] He says that "menstruation continues as usual, or perhaps a little more abundant; but generally it is less, and sometimes suppressed." From this we should be led to conclude that dysmenorrhœa, or even irregularity, in his estimation, are the causes of this complaint. We are every way certain that we have seen the "irritable uterus" unaccompanied by dysmenorrhœa; and we are equally certain that we have seen the latter many times extremely severe, without the former—these conditions appear to be rather the consequences than the cause of the "irritable uterus" in many instances, while, in many others, they are unattended by them.

the aberrations of the menstrual discharge, if there be any, are owing to the inflamed or irritable condition of the neck of the uterus.

Third. The initial symptoms of the "irritable uterus" are not those of nervous mobility, though these symptoms are almost sure to follow, if the disease persist for a considerable time.

Fourth. The symptoms laid down by Dr. A. are virtually the same as those to which the inflamed spine gives rise, and which affection, agreeably to Mr. Tate, produces the hysterical phenomena. These symptoms, however, do not necessarily belong to the "irritable uterus," but may be looked upon as purely nervous, and arise out of a morbid condition of some other part, or may be the *result* of an "*irritable uterus.*" Dr. A. thus cautions upon this point:—

"Whenever a female complains of a pain under the left breast, with or without palpitation or pulsation of the heart; of pain in the right hypochondrium; in the situation of the left or right colon: or acute pain generally over the whole belly, or in the region of the bladder or kidneys—always be upon your guard; and if, upon inquiry, you find few or many of the constitutional symptoms I have described, together with uterine irritation, as shown by pain in the pelvis, in the loins, or in the thighs, before or during the flow of the catamenia; by too frequent or too profuse menstruation; or by leucorrhœal discharge: I say, when you find such an assemblage of symptoms and circumstances, your suspicions will amount to a high degree of probability that the complaint is not of an inflammatory nature," p. 31.

Now these very symptoms, we must repeat, Mr. Tate declares to belong to the inflamed spine. We must, therefore, say, that when these symptoms prevail, that neuralgia is either combined with, or is existing independently of, the "irritable uterus;" for we are of opinion, that the "irritable uterus" may exist in its gravest form in a state of combination with neuralgia, or it may be present without this complication, and exist independently. We think this opinion is abundantly confirmed by the symptoms enumerated by Dr. A. as constituting, or as arising from, "uterine irritation;" but which, as we have just said, Mr. Tate claims for inflamed spine. Such as a pain seated under the left breast, or under the margin of the ribs of the same side; or pain under the margin of the ribs of the right side; pain in the course of the ascending and descending colon; pain affecting the whole abdomen; pain in the region of the stomach; and, lastly, pain in the region of the kidneys; sometimes extending down the course of the uterus to the bladder, p. 22. Now, in our opinion, the first five of the symptoms do not belong to the pure, or idiopathic, "irritable uterus." First, because we have known them to be absent in several instances of exquisite-

ly formed "irritable uterus;" 2dly, because they are constantly present in hysteria, where the uterus may be in a perfectly healthy state—for we have witnessed them in women who bear healthy children; but we have never known conception to take place in women who labour under "irritable uterus." And the last enumerated sign belongs more properly to the carcinomatous than to the "irritable uterus."

Fifth. Dr. A. makes very young females liable to the disease which he describes; now we have seen the "irritable uterus" only in women who had arrived near, or had passed, the middle period of life.[1]

Diagnosis.—The "irritable uterus" may be distinguished from a neuralgic condition of this part by the following important particulars. 1st, In neuralgia of the uterus there is an entire absence, at least as far as we have observed, of the general, or what we have termed the constitutional symptoms, especially the evening febrile movement. 2d, There is seldom, (nor is there ever, necessarily,) a vaginal or leucorrhœal discharge; if it be present, it may have been habitual, and have existed before the neuralgic attack. 3d, There is no preternatural heat in the vagina. 4th, Nor is the uterus so sensible to the touch, unless it be examined during the *painful continuance of the paroxysm*, and then, perhaps, it is even more exquisitely sensible than it is in the pure "irritable uterus;" besides, in neuralgia, the pain is less constant, but is more violent during the paroxysms, and these pretty constantly observe periodicity, but which the "irritable uterus" is free from. 5th, In neuralgia, a paroxysm may be suddenly induced by passions or emotions of the mind, which is never the case in the "irritable uterus," though the latter is susceptible of great and occasional augmentation of pain, through the medium of the circulation, by errors in diet, or improper exposure.

The "irritable uterus" is, however, more frequently confounded with prolapsus uteri than with any other complaint, as the local symptoms of the latter are a miniature representation of the former. And as the womb is almost sure to descend more or less in the "irritable uterus," this precipitation has been supposed

[1] Since the above was written, I have been consulted by letter, in the case of a young lady, only eighteen, who, I have not the smallest doubt, is labouring under "irritable uterus," and forms an exception to the general rule of the period of life at which this disease may show itself. All the symptoms that mark this disease are present, even to the prolapsed state of the uterus. This is a case of great interest, as it occurs in a young person who, in other respects, enjoys a fair proportion of health; but which will, and must very soon, be destroyed, if this terrible affection be not speedily removed. There is, in this young lady, a strong scrofulous tendency, with some development.

We have recommended absolute rest; a milk and vegetable diet; the rhubarb pill; occasionally, leeching or cupping; the iodine, and injections of the solution of the nitrate of silver, on the faith of its influence upon certain inflamed surfaces in other parts of the body.

to be the cause of all the inconveniences experienced; and hence, the frequent failures of the pessary when it has been applied for the relief of the prolapsus. Nay, sometimes serious and permanent injury has been done by this instrument in these cases, without the practitioner being exactly aware why mischief should be caused by a machine that had been so often successful in cases so apparently alike.

Consequently, it is a matter of much moment, that the two affections should not be confounded; we would, therefore, suggest the observance of the following precautions, when an examination is about to be made per vaginam, for prolapsus uteri. First. Let the patient be placed upon her back with the knees drawn up. Second. Let the parts be well lubricated, that no pain may be excited by the introduction of the finger, lest a wrong conclusion be drawn from the complainings of the patient. Third. After the finger has possession of the vagina, a gentle search should be made for the neck of the uterus, and when found, the patient's attention should be solicited to the degree of sensation produced by touching it; the portion of the body of the uterus immediately above the neck, and the sides of the vagina—inquire if there be any extraordinary sensibility in either of these parts; and if there be, in which of the parts it resides; and if either of these parts be morbidly tender, the pessary must not be introduced, until this has been abated by suitable means. In this case the patient will be labouring under "irritable uterus," and not a simple prolapsus. Besides, in the "irritable uterus," the prolapsus is not always permanent—but sometimes only so in the erect position of the body, as in standing.

The "irritable uterus" has also been confounded with carcinoma of this organ, when it has been about to throw off its indolent condition, and to commence the ulcerative process. But the "irritable uterus" is easily distinguished from the carcinoma, by the neck of the uterus, in the latter, still retaining the original marks of carcinoma; as a thickening of the whole of its substance; by its having a cartilaginous feel; by its being shorter; and the os tincæ being more open than natural; by tumours still occupying the neck and pelvic portion of the body of the uterus; by a pretty abundant and sometimes constant discharge of a serous fluid, which may be occasionally tinged with blood, and the almost entire filling up of the vagina by the increased size of the uterus.

The "irritable uterus" has also been confounded with dysmenorrhœa, but from this functional derangement of the uterus it is easily distinguished. First. In dysmenorrhœa pain is only felt during the menstrual action; whereas, in the other, the suffering is more or less constant, though subject to occasional aggravation, and this of a severe kind, at other than the catamenial

periods. Secondly. The "irritable uterus" is not necessarily attended by dysmenorrhœa, nor is dysmenorrhœa usually attended by this irritable condition of the uterus; for we have seen very many instances to the contrary.

Pathology.—We have already declared our belief that this disease consists in a chronic or sub-acute inflammation of perhaps all the tissues that compose the neck of the uterus. The pathological condition of the womb, in this complaint, has, however, never been ascertained, by post mortem examination, as it very seldom, or perhaps never, of itself, destroys the patient. It were much to be desired, that an examination be made, should opportunity present—as we are of opinion, that more derangement of structure would be found in some cases, than appears to be allowed to exist by either Dr. Gooch or M. Genest, for we have met with several cases in which the size and form of the neck of the uterus was much altered from its natural condition. Indeed the admission of Dr. G. and M. Genest would seem to declare the same thing. Dr. G. admits that "the neck of the uterus is *slightly* swollen," (p. 312,) though he denies a change in its structure. M. Genest declares the same thing; indeed, the latter seems but to have copied Dr. G. in his account of this disease. It is true, he has seen the disease, and appears to have been attentive to its phenomena; yet we would be rather disposed to question his accuracy, as he mentions that this disease continued during the whole of a pregnancy that terminated happily. Now, as far as we have had opportunities of noticing this disease, (which have been many,) we have never known a single instance of impregnation in a patient labouring under the "irritable uterus."

We admit that, in an unmixed or idiopathic neuralgia of the uterus, very little, if any, derangement of structure takes place; from which circumstance, we are disposed to believe, that when this undisturbed condition of the womb is met with, it betrays the neuralgic form of this disease.

Dr. Gooch will not admit the uterus to be in a state of chronic inflammation. He says that chronic inflammation, like the acute, is always "a disorganizing process;" but if we are not very much in error, a chronic inflammation may exist for an almost indefinite period, in some instances, without any *very manifest derangement* of a part; and that there is some derangement in the "irritable uterus," we are, from many observations, very certain—besides, there are present in this affection all the common characters of inflammation—as heat, swelling, and pain; but whether there be unusual redness also, we are not prepared to determine.

We are, therefore, disposed to believe that the conclusion of Dr. Gooch is rather hasty; for, indeed, his attempt to support his opinion is rather by analogies than by pathological observation.

He says, "The disease which I am describing resembles a state which other organs are subject to, and which, in them, is denominated irritation. Surgeons describe what they call an irritable tumour in the breast. It is exquisitely tender; an ungentle examination of the part leaves pain for hours; it is always in pain; but this is greatly increased every month, immediately before the menstrual period. Although apprehensions are entertained of cancer, it never terminates in disease of structure." "Mr. Brodie describes a similar state in the joints." It chiefly occurs amongst hysterical females; it is attended by pain; at first without any tumefaction; but the pain increases, and is attended with a puffy, diffused, but trifling swelling; the part is exceedingly tender; this assemblage of symptoms lasting a long time, and being often little relieved by remedies, occasions great anxiety, but "there never arise any ultimate bad consequences." "The disease," says Mr. Brodie, "appears to depend on a morbid condition of the nerves, and may be regarded as a local hysteric affection." "These painful states of the breast, and of the joints, appear to be similar to that which I have been describing in the uterus; similar in the kinds of constitutions which they attack; similar in pain; in exquisite tenderness; in resemblance to the commencement of organic disease; and in proving ultimately to be only diseases of function," p. 318.

Now, we would ask, if the condition of the parts here described, and that of the portion of the womb implicated in the disease we are treating of, were identical, would it prove, that the symptoms to which they give rise do not depend upon a modified inflammation? Does the attempt to illustrate the condition of a part involved in disease, by adducing the inexplicable phenomena presented by diseases of other parts, (however strong their analogy may be,) throw any light upon its pathology? Is not the pathology of "the irritable breast," or, "certain affections of the joints," as entirely unascertained as the situation of the structure involved in the "irritable uterus?" Does any definite pathological condition of a part present itself to the mind, by saying that the phenomena of the diseases offered as illustrations depend "upon a morbid condition of the nerves, and may be regarded as a local hysteric affection?" or, in other words, is our knowledge of the pathology of the "irritable uterus" any way advanced by declaring it is the same as in a "local hysteric affection?" Who has demonstrated the condition of either the brain or the nerves, which give rise to the phenomena of hysteria; of the glands of the mamma in "the irritable tumour of the breast," or of the joints, in the disease of these parts, as described by Mr. Brodie? Has it been proved, that the affection of a part called inflammation, (either acute or chronic,) has no agency in the production of the symptoms which characterize the several diseases just named? Certainly it has not.

Does Dr. Gooch's denial, that the "irritable uterus" depends upon a chronic inflammation of the neck, and perhaps a portion of the body of the womb, derive any support from Dr. Anderson declaring the same thing? We think not.

In fact, whilst Dr. Gooch denies the presence of inflammation, he at the same time furnishes us, in the history of his cases, with sufficient evidence that this condition of the parts concerned really exists. Thus, in relating the history of the disease in question, one of his patients, he says,—

"In the lowest part of the abdomen, or a little lower even than that internally, she first felt a *sense of heat;* to this was speedily added *a sense of throbbing, then a sense of distention, as if there was a tumour within, which gradually expanded till it felt ready to burst:* then began spasms; these she described as shooting, or electric shocks, darting from the tumour up into the abdomen; they recurred every five or ten minutes, making her start with such violence as to shake the bed. I have been in the adjoining room when she has been in this state, and have perceived the shock; between the spasms she felt what she called a convulsive pain. Nothing relieved these spasms but *a small local bleeding;* she has used fomentations, simple and medicated, for many hours, hip baths, opium in draughts, and in injections, without relief; but as soon as four or six leeches were applied, and had drawn blood, the spasms, distention, throbbing, and heat, speedily subsided, leaving a dull permanent uneasiness. The uterus was so tender, that the examination of it was torture, and left severe suffering for hours,"[1] p. 335.

Need better proof be given of the inflammatory nature of the irritable uterus than the treatment of this case? Certain sensations of spasms accompanied this complaint; the sensations are described as consisting of *local heat, throbbing, and expansion, to a feeling like bursting;* the spasms as shooting or electric shocks, darting from the uterus up into the abdomen, which we are informed neither opium nor other means would appease, though persisted in for hours, yet were "*instantly relieved by four or six leeches!*"

Causes.—The remote causes of this very tedious and painful affection are involved in great obscurity—indeed it may be questioned whether any satisfactory remote or predisposing cause has ever been assigned, though we are in possession of a number of the exciting. These consist chiefly in severe fatigue, or other bodily exertion, as it almost always shows itself, after this has taken place, where predisposition has existed. Dr. Gooch says—

[1] We have never met with such an exquisite degree of sensibility in the *genuine uncomplicated irritable uterus*, as is here spoken of; where this has existed, to the extent described by Dr. Gooch, we have always had reason to suspect neuralgia was added.

"In one patient it came on after an enormous walk during a menstrual period; in another, it was occasioned by the patient's going a shooting with her husband, not many days after an abortion; in a third, it came on after standing for several hours many successive nights at concerts and parties; in a fourth, it originated in a journey in a rough carriage over the paved roads of France; in a fifth, it was attributed either to cold or an astringent lotion, by which a profuse lochia was suddenly stopped, followed by intense pain in the uterus; in a sixth, it occurred soon after, and apparently in consequence of matrimony," p. 314.

It is evident that the causes here enumerated were only exciting causes; in none do we discover the predisposing, if we except the instance of abortion. It is more than probable that this effort of the uterus may be one of the common predisposing causes of the "irritable uterus;" we at least can say, that three of the severest cases we have met with were preceded by abortion. But, if abortion be admitted as the predisponent, it must also be granted that there may be many other causes, as we witness the "irritable uterus" in the unmarried, and in the widow female, where abortion has had no agency.

Dr. Gooch says, his "patients had previously manifested signs of predisposition to it; they were all sensitive in body and mind: many of them had been previously subject to the ordinary form of painful menstruation." He then adds, with a view, we presume, of conveying some idea of the pathological condition of the uterus, that "the disease seemed to consist in a state of the uterus similar to that of painful menstruation, only permanent instead of occasional," p. 315.

Upon these observations, we beg leave to offer a few remarks, that our experience in the affection under consideration has suggested. First, it by no means accords with our observations, that those who are "sensitive in body and mind," are more obnoxious to the "irritable uterus" than those of an opposite temperament—for we have seen this disease in its most aggravated form in the hale and robust, and especially such as were of the sanguine temperament. Secondly, That no analogy exists between that state of the uterus which gives rise to dysmenorrhœa, and that in which consists the "irritable uterus." For dysmenorrhœa is owing to a certain pathological condition of the *internal and secreting surface* of the uterine cavity; whereas, in the "irritable uterus," some change has been produced in the *parenchyma* composing the neck of this organ, and to which the disease is confined, agreeably to Dr. Gooch's own showing. Thirdly, As we do not know in what manner the inner lining of the body and fundus of the uterus is affected, to produce painful menstruation, so we cannot be enlightened in regard to the pathological condition of the neck, while labouring under the con-

dition we are treating of. Fourthly, In dysmenorrhœa, the *pain* that accompanies the secretion of the menstrual blood, is not caused by any particular condition of the secreting organ, abstractly considered; but to the changes wrought upon this fluid itself during its elimination, causing it to remain within the uterine cavity, until it becomes, to all intents and purposes, a foreign body, and requiring the aid of uterine contraction to expel it—hence the pain of dysmenorrhœa, and, consequently, between it, and that attendant upon the "irritable uterus," there is not the slightest resemblance in either kind or cause. Fifthly, Were there the strongest resemblance between the pathological condition of the internal surface of the uterine cavity, and that of the neck of the uterus, in the two affections under consideration, we should not profit from the analogy, as Dr. G. has not pointed out the condition of the former, that we might benefit from its resemblance to the latter.

Dr. Gooch insists that the "irritable uterus" is "a disease of function, and not of structure," p. 316. We would ask of what function? For Dr. G. admits that the menses continue to be discharged, though not in the most healthy manner; but we have endeavoured to show that there is no necessary connexion between the discharge and the disease in question—for we have seen them, as we have observed before, altogether independent of each other. And, if it be not the catamenial function to which he alludes, we are altogether at a loss to what other to assign it.

Treatment.—Would it were in our power to say that the treatment of the "irritable uterus" were as well understood, and as void of difficulty and uncertainty, as its obstinacy and severity render it desirable; for were we candid, we must honestly confess that the contrary of this is nearer the truth. This difficulty, however, does not arise so much from the indomitable nature of the disease, as from the length of time required to overcome it, and the privations to which the woman must submit who looks forward to its cure. Patience becomes exhausted, and confidence in the efficacy of remedies is too quickly destroyed; for relief is not only almost *always tardy*, but is too often uncertain; especially with patients whose circumstances and avocations will not permit them to fulfil any plan, however judiciously laid down, or however important its adoption may be to their welfare.

We have just declared that relief in this disease is almost always tardy; for however judiciously remedies may be advised, or however faithfully they may be applied, they are far from being uniformly speedy in their effects: in this opinion we do not stand alone; for it is the declaration of the several authorities we have quoted above, and but too certainly confirmed by our own experience; months, nay years, are sometimes required to

accomplish a cure; and if this be effected even after a very long trial of means, the woman may felicitate herself that she has been able to procure health, even at so great a price.

In no disease does recovery so much depend upon the conduct of the patient herself, as in the "irritable uterus." The patient must make up her mind to a long and irksome confinement to bed; she must consent to, perhaps, the frequent use of external applications and internal remedies, and submit to a system of diet or abstinence that will not bear infraction with impunity, if she expect to recover from this painful, wayward, and perplexing affection. All this should be fairly and candidly stated, and the patient's mind should be duly impressed with the absolute necessity of perseverance, and of the penalties that will await neglect, or that will follow infringement.

On the part of the practitioner, much caution, as well as prudence is required, that no ill-founded hopes may be raised, or that the patient may not be unnecessarily sunk to despondency. He should not make a false estimate of the persevering nature of the disease, from its apparent mildness, at the moment of its investigation; nor be too suddenly elated, at the seeming success of his plan; for the symptoms of the "irritable uterus" are not uniformly severe, or constantly obstinate, yet there is, perhaps, no disease of the female system more wayward in its intensity, nor more liable to recurrence, from either neglect or imprudence. He should be well aware of a truth, proved by multiplied experience—that no affection brooks trifling with so bad a grace as the "irritable uterus;" and that all departures from prescribed rules is almost sure to be followed by penalties much beyond the seeming importance of the trespass.

But, notwithstanding the unyielding nature of the disease of which we are treating, much may be done towards its relief, if we cannot always promise its removal; and we are rather disposed to believe that the difficulty of its management arises very often from the impatience, the imprudence, or the circumstances of the patient, rather than from the insurmountable nature of the disease itself. The first prevents the best application of the remedies; the second may defeat their best operation; and the third will perhaps interrupt their due employment. Having thus pointed out some of the difficulties inseparable from the management of this disease, and suggested certain cautions, that must never be lost sight of during this treatment, we will now proceed to detail all that experience has hitherto suggested for its relief.

The therapeutical means will consist, first, of rest; secondly, of bleeding, both general and local; thirdly, of purging; fourthly, of blistering, or of the employment of rubefacients; fifthly, of narcotics; sixthly, of injections per vaginam; seventhly, of re-

gimen; eighthly, of the application of the pessary; and, lastly, of tonics.

Of Rest.—A steady and persevering repose of body is a sine qua non in the treatment of a confirmed "irritable uterus." By rest, we are to understand almost absolute quiet in a horizontal position. The patient may make her election as regards the substance on which she is to repose: it may be a bed, a mattress, a couch or sofa; or she may occasionally vary either of these, provided these changes are neither made too often, nor too suddenly, nor at the expense of the patient's own exertions. The patient, for instance, may be carefully removed from either her bed or her mattress, to a couch or sofa, and this daily, if she choose this change, but she must preserve the horizontal position under all circumstances. She must not sit up even in the bed, or on the mattress or sofa, even for a short time, as this slight indulgence is almost sure to be followed by an increase of pain, or other inconvenience; à fortiori, she must not be permitted either to stand for any time upon her feet, or to walk.

Nothing shows the extreme sensibility of the uterus, (or rather a portion of it,) more decidedly, than that augmentation of pain, which almost instantly takes place from an erect, or even a semi-erect position, and which obliges the woman, almost instinctively, to return to a horizontal one. All her unpleasant symptoms are suddenly increased; especially the throbbing sensation, which, as we have declared above, so particularly characterizes this disease. This increase of pain most probably arises from two causes: first, from the uterus being obliged to sustain much of the weight of the abdominal viscera; and, secondly, this position retards the return of blood from these parts.

At first, the confinement to bed is extremely irksome; but the patient should be encouraged to perseverance, by the assurance that this unpleasant sensation will wear off in a short time; and that she will not only become reconciled to the horizontal position, but will absolutely covet it, from the immediate and certain relief she will experience by returning to it after having sat up for a few minutes, or, sometimes from even attempting it. The cause of this increase of pain we have endeavoured to explain above.

Of Bleeding.—First, we shall say a few words upon the occasional necessity of bleeding from the arm or foot. We would employ general bleeding only under two circumstances of the system—first, where the circulation is vigorous; the pulse tense or chorded; where there is much pain, and especially in the abdomen, accompanied by cough or headache. In such cases we would abstract blood from the arm, to an amount that would afford relief even during its flow, did this require but eight or ten ounces, or a much larger quantity: for we have uniformly

found that the proper abstraction of blood from the system at large, in the beginning of our treatment, was sure to be followed by advantages that could be procured in no other way—besides, if we draw blood in sufficient quantity at first from the arm, we need rarely repeat this operation; while, at the same time, its abstraction gives a more decided efficacy to other remedial means. Secondly, should the symptoms enumerated above be attended with a sparing menstrual discharge, we would abstract eight or ten ounces of blood from the foot, and this should be repeated five or six days before the next menstrual period, if the first has not succeeded.

But the "irritable uterus" will require the abstraction of blood from parts near the seat of the affection, and this again and again —the parts hitherto selected for this purpose have been the sacrum, or the abdomen; but multiplied experience has convinced me that as much advantage, to say the least, but we really think much more has followed, when the blood has been drawn from the inner part of the thighs, three or four inches below the vulva; it may be drawn from one or both thighs at the same time, by either cupping or leeching, and should be repeated every four weeks, a few days before the menstrual period, until pain, &c., are much abated, or until the patient can bear to be placed upon her feet, or even walk, without much inconvenience or discomfort. Four or five ounces may be drawn at each time.

We have had, within the last year, a number of exquisitely formed cases of this disease; and we are happy to state, that if blood be abstracted by leeches, immediately on the womb, to the amount of four, five, or six ounces, (as the inflammation may be more or less attended by a high degree of sensibility of the uterus,) the most decided advantage will quickly result. This operation is one of less difficulty in its execution than would, at first sight, be supposed. The greatest difficulty is to get the patient to submit to it. It gives less pain than leeching from an external surface. We have seen several cases of irritable uterus yield to this plan, and the other means, diet, rest, &c., in a very short time, and much more completely. A tube is introduced into the vagina, through which the leeches are conducted to the neck or other portions of the uterus. The after bleeding is generally more considerable than from the skin. The application of leeches to this organ is a great improvement in the management of any of its affections.

In judging, however, of the diminution of pain, it must be kept in view, that the effects of long confinement in a horizontal position be not mistaken for the consequences of the change of position upon the affected parts. We should, therefore, inquire into the nature of the existing feelings, and compare them, both in degree, and in their nature, with those that really belong to the

disease. To aid us, therefore, in forming a correct judgment upon this important point, we should, from time to time, make a careful examination per vaginam, with a view to determine the existing degree of sensibility in the neck of the uterus, and the several portions of the vagina. By doing this, we shall be able to determine the exact impression we are making upon the disease; and, consequently, thereby ascertain the extent of necessity for perseverance. In making this estimate we must never fail to take into consideration the state or degree of the "throbbing sensation" we have mentioned, as particularly belonging to the disease. By this very much may be learned; for, if this feeling do not diminish with the sensibility, we may be certain that the affection has only made a truce, but has not retrograded; while, on the other hand, we may be assured, that, in proportion to the abatement of this unpleasant feeling, is the abatement of the disease itself.

Purging.—There is no one of the remedies proper in this disease so difficult to manage as purging—for there is no doing with or without it, as the bowels in this complaint are always either constipated, or too easily made free, and either condition is sure to aggravate the suffering. In this opinion I am happy to be supported by the experience of Dr. Gooch. But, notwithstanding these difficulties, it is every way important that the bowels should be moved once a day; neither less nor more; —and for this purpose nothing answers better than the simple rhubarb pill.

Blistering and Rubefacients.—We are much at a loss to determine the exact value of blistering in the "irritable uterus," as it has in some instances, we have thought, proved useful, while in others we have feared it has proved mischievous; on the whole, therefore, we are distrustful of this remedy. But not so of rubefacients, or vesicating with the tartar emetic ointment. We have uniformly found the mustard bath of great utility in this disease, as there is a prevailing coldness of the feet and legs. This bath should be used whenever the coldness of the feet claims attention, be this daily, more seldom, or oftener. The ointment should be applied to a pretty large surface of the abdomen twice a day, until a pretty extensive vesication is produced, and repeated from time to time, as the vesicles may heal, and as the urgency of the symptoms may require.[1]

[1] We have frequently had cause to lament the tardy effects of this ointment, though pretty well aware of the causes. The first is, the adulteration of the tartar emetic; and the second, from the imperfect manner in which the ointment is prepared. We were, therefore, happy in meeting with M. Mialhe's directions for making it. As the efficacy of the ointment depends upon the minuteness of the division of the tartrite of antimony, M. M. recommends that "a saturated solution of it be made in cold water, and that it be then precipitated with alcohol. A very small quantity of the latter will suffice, he says, to precipitate the tartar emetic

Narcotics.—Agreeably to our experience much caution is required in the use of narcotics, at least of opium; for, to this drug only, in one form or other, do we fly, when it is proper to subdue pain by this means. Much mischief, we are persuaded, has been done by the too free use of this medicine, when exhibited to abate pain (coute qui coute,) when the disease has been mistaken, or not well understood. For, as we have persuaded ourselves that the disease is inflammatory, we can readily understand why opium has done mischief, or why, at least, it has not proved always successful. This opinion must not be taken for a prejudice, or as one founded upon a hypothesis; for the medicine has failed in other hands, as is abundantly proved by Dr. Gooch's cases. Yet there is a period at which there is both propriety and advantage in the use of opium—and this is, after the general febrile symptoms have been removed or abated, and when the local ones are diminished in intensity.

The neck of the bladder, and the whole tract of the urethra, are sometimes in a highly sensitive condition, and give much pain, especially in the effort to pass water; for the relief of which much benefit has been derived from smearing the parts just mentioned, morning and evening, with the following ointment, conducted to the parts by the point of the patient's own finger.

℞. Ext. Belladon. - - - - ʒiss.
Cerate simp. recen. preparat. ʒj.—M.

When this period arrives, we do not hesitate to give opium, laudanum, black drop, or preferably the sulphate of morphia in adequate doses at bed time, or oftener, if suffering require. Opium may be given with much advantage in either of the forms now mentioned, in enemata, as well as by the mouth. But we should carefully watch the influence of this medicine upon both the general and local symptoms; and if either be increased after its exhibition, or, in other words, if it fail in procuring relief, the quantity should be diminished, or it should be withheld altogether, until the system be farther relieved of its susceptibility to stimuli. To prove how important an attention to this circumstance is, we need only refer to the case we have related from Dr. Gooch, where opium, and many other means were employed, without benefit; yet the patient was almost instantly relieved by the application of a few leeches. In a word, if opium is to be useful, it must only be employed under a reduced state of the arterial system.

Of Injections.—Under this head, we will comprehend, first, such as will deterge the vagina, and, at the same time, sooth the

in the form of a powder of extreme tenuity. The precipitate is to be collected on a filter and dried. Two drachms of this, mixed with an ounce of simple cerate, will make a very active ointment."—Amer. Journ. of Med. Sciences, for February, 1831, p. 522.

uterus: of this kind is lukewarm flaxseed or slippery elm bark-tea: a quantity of this should be thrown up the vagina, by a syringe of sufficient size, three or four times a day, or oftener, if suffering be considerable, either from pain, heat, or throbbing. The injection should be retained for some time by applying a cloth to the vulva, so as to prevent its too early escape. The other is sedative—and may be composed of eight grains of opium dissolved in a pint of hot water, and carefully strained—an ounce of this may be used after the other injection has removed itself. Quere, as more or less leucorrhœa pretty uniformly attends this disease, might not a weak solution of the nitrate of silver be used with advantage, as this remedy is known to exert a tranquillizing influence upon certain inflamed surfaces? We have found the "throbbing" much relieved by introducing a small piece of sponge saturated with equal parts of laudanum and water, within the os externum.

Regimen.—The diet of the patient should be most carefully attended to, and made to conform to the general indications; namely, to abate inflammation, and to relieve pain; therefore, an antiphlogistic regimen, strictly so called, should be constantly adhered to, and persevered in, even for some time after the apparent removal of the disease—for, as noticed before, no disease bears imprudences worse than the one of which we are treating.

Of the Pessary.—It frequently happens, that the uterus will remain prolapsed after the sensibility of the uterus is removed—when this is so, much advantage will be derived from the use of a well-adjusted pessary. Attention, however, should be paid, that it excite no pain, or other inconvenience, by its presence; if it should, it must be instantly removed, and not reapplied, until the parts have acquired a more natural state of feeling.

Tonics.—Much injury is frequently done, by the too early use of this class of remedies—in several instances we have witnessed severe relapses, by attempts to give strength to the body; they should, therefore, be withheld for a long time, or perhaps more safely, altogether, in very susceptible systems. In two instances where the stomach had suffered much, great advantage was found from the use of the phosphate of iron, given in from six to ten grains, three times a day.

We have selected two or three cases, that the general and local symptoms of the "irritable womb" may again be brought into view, and that the common routine of practice may be the better understood. In making this selection, we have not been governed by any peculiarity they exhibited, or because there was any particular departure from the ordinary mode of treatment; they have been chosen, with one exception, (the third) because they were considered as fair instances of the "irritable uterus," and

exhibited the most usual train of symptoms, as well as the most uniform mode of treatment.

Case I.—Mrs. ——, aged thirty-six, the mother of five children, had been labouring under the following symptoms several months before we visited her; namely, a constant tenderness immediately behind the mons veneris, which was converted into acute pain by any sudden exertion of the body, especially by walking up stairs, or going down. The pain experienced upon such occasions was of a lancinating kind, and of great severity; and when once provoked, would continue from one to two or three hours, suffering, however, a gradual abatement during this time. This pain was constantly excited if she sat upon a hard substance, and she was therefore obliged to guard against this inconvenience, by placing a soft cushion over the hole of a pierced chair. She found that emotions of the mind, if suddenly induced, would have the effect, though in a more moderate degree than some other causes. Coughing or sneezing was sure to create great suffering. Upon examination per vaginam, the uterus was found considerably lower than natural; its neck was exquisitely tender, and larger than common—the os tincæ very closely shut, and the part of the body of the uterus within reach of the finger, as well as the vagina, were extremely tender; so much so, indeed, as to render the examination a very unpleasant operation—slight leucorrhœa, of a milky appearance; the whole neck of the bladder was enlarged and tender, with a frequent desire to pass urine, accompanied with a disagreeable sensation in the bladder, and the whole tract of the urethra. The urine was high-coloured, sparing, and deposited largely. The menstrual discharge was pretty regular in its recurrence, proper in quantity, and employing about six days for its completion. This discharge was announced always by tenderness in the mammæ; a sense of fulness in the region of the uterus, with a feeling as if the uterus were constantly sinking lower in the pelvis—there was no dysmenorrhœa, nor any discharge of coagula.

The head was very frequently attacked by severe pain, especially on the back part of it. This became worse almost always in the afternoon, at which time a slight febrile exacerbation was sure to take place, though the pulse was always excited beyond the natural beat—it was corded, and not large; the skin dry, and, where covered, the heat was above the natural temperature. The hands, feet, and legs, constantly cold; the bowels constipated, but easily urged to diarrhœa; the appetite pretty good, though variable, and the digestion not bad. The tongue very slightly furred, and paler than natural.

She was ordered to observe a horizontal position; a strict antiphlogistic regimen; to lose ten ounces of blood from the arm;

the mustard bath for the feet and legs every other night; luke-warm flaxseed tea injections per vaginam three times a day; a rhubarb pill every night at bed-time; and to forego matrimonial privileges, as extreme suffering was always experienced from their indulgence.

This plan was persevered in for three weeks without any remarkable change, save a general improvement of feelings. The uterus and every thing else remained pretty much as at the commencement of the plan. Four ounces of blood to be taken by leeches from the inner portion of the thighs—every thing else as before. After the third month had elapsed, there was an evident melioration of symptoms; especially of the uterus and the surrounding parts—their sensibility was much diminished, and the leucorrhœa abated—during this time leeches had been applied three times; the bowels kept daily open, and the urine was discharged less frequently, and with more freedom, but it still deposited considerably.

Injections of a weak solution of the acetate of lead, (two grains to the ounce,) were ventured on; leeches to the thigh, as before; rest, diet, and the rhubarb pill, as before.

At the expiration of three months more, symptoms were much improved; the plan had been persisted in with great fidelity and patience. Injections of the solution of opium were now substituted for those of the lead—a sixth of a grain of morphia was ordered whenever pain became severe; for this had never failed to attend, in a greater or less degree, though with much less severity and frequency than before. This lady was once blistered on the sacrum, but with such doubtful effect, that it was never repeated. At about this time the tartar emetic ointment was rubbed upon the lower part of the abdomen until a copious crop of pustules appeared, and with manifest advantage. It may be proper to observe, that this application can only be serviceable, we believe, after the violence of the disease has abated—it may be repeated in three or four weeks after the first, if the sensibility of the neck of the uterus be not subdued—we never use this ointment in the beginning of the treatment.

It now appeared that the disease was more certainly under the control of the remedies already mentioned, and was daily abating in severity—the leucorrhœa entirely disappeared, nor has it returned. At the end of thirteen months the patient was entirely well, though weak from long confinement, &c., and was now, and not until now, permitted to sit up: after this was tried a few days, and apparently with advantage, she was allowed to walk in her chamber, and rapidly gained strength by the indulgence. It was, however, soon found, that the prolapsed condition of the uterus was offering considerable inconvenience; and as the parts had entirely recovered their natural condition, a

pessary was introduced with very prompt and decided advantage, and the patient is now enjoying a very comfortable state of health.

Case II.—It will not be necessary to detail the symptoms of this case, as they bore an entire resemblance to the one just related. There were, however, certain points of difference; namely, the patient had been labouring under the affection for several years, but had not derived the slightest benefit from what had been done for her relief. It was looked upon as a disease of debility, and the severe sufferings were supposed to be caused by spasm—hence, bark, steel, cold bath, sea-bathing, opium, hemlock, henbane, stramonium, warm bath, blistering, salivation, twice repeated, &c., &c., were had recourse to, but to no other purpose than to increase debility, without diminishing suffering. In this case, pain was not so violent, but there was more leucorrhœa, and more profuse menstruation. This lady was confined to her bed from extreme weakness when we first saw her—the febrile affection was more distinctly marked, and great obstinacy of bowels. General bleeding was not employed in this case; with this exception, it was treated like case first; but fortunately in this instance the patient was entirely restored in seven months. In this case, like the former, the pessary was employed from the period just mentioned.

Case III.—This case differed from the two now related, in three important points; first, the menses were very irregular in their returns, and always attended by hemorrhagy to a very considerable degree; coagula were expelled in great numbers, and after each spell the patient was left much debilitated, though she for the most part kept about; secondly, there was profuse leucorrhœa of a purulent appearance; and thirdly, the neck of the uterus was very much larger than we had ever witnessed before, and its sensibility was very great. The same general plan was adopted, and the patient was very much relieved at the end of about five months, though not altogether well.

When we examined the uterus last, its neck was reduced to its natural size, and had lost nearly all its morbid sensibility. We have had some reason to regret that the plan which had so far relieved the disease, had not been persevered in three or four months longer, as there was every reasonable expectation that it would have proved still more beneficial.

Notwithstanding the success that attended the cases just related, as well as many more that we could mention, it is but fair to acknowledge, there have been others, in which no such benefit was received, though remedies, generally speaking, were faithfully used, and every reasonable precaution taken to ensure success.

From recent experience, I have found the iodine of great ser-

vice in this indomitable disease, but never to be a decided remedy; but much relief has been found from it; so much so, that patients believed they were getting well fast, but it seemed to have an influence so far and no farther. It was given in the form of Lugol's tincture, No. 3. It was commenced by ordering six drops every morning, noon, and evening, in some sweetened water, and increased very gradually to thirty drops. It abated many of the symptoms very sensibly, especially the pain and constant uneasiness that was felt in the vagina, and rendered coition when it was indulged in much more tolerable.

CHAPTER XVI.

ON UTERINE HEMORRHAGE.[1]

The mode I shall pursue in treating this subject, will be,

First, To consider very briefly the nature of the connexion of the ovum with the internal surface of the uterus.

Secondly, To investigate the causes which may impair this connexion, and thus expose the surface from which the blood is derived.

Thirdly, To examine into the mode of action of these agents, in effecting this lesion.

Fourthly, To point out the several periods of utero-gestation, at which this lesion may take place—and trace the various consequences which may result from it, at these several periods.

Fifthly, To notice the modes of treatment at these different stages, and under these various circumstances.

Sect. I.—1. *The Connexion of the Ovum with the Uterus.*

Soon after the ovum is deposited within the cavity of the uterus, we find it connected, through the whole extent of its surface, with the internal face of this organ. The uterus and ovum mutually contribute to this end: on the part of the womb, we find it produce a soft spongy substance, called decidua; on the part of the ovum, we discover its external covering, or chorion, shooting

[1] Of this disease, the unavoidable species, we have thought, only belonged properly to midwifery; consequently, that which arises from the "implantation of the placenta to the mouth of the uterus," is not treated of here, only the accidental variety.

out innumerable vascular fibres—and both, when united, serve as the bond of union between the ovum and the uterus.

The efflorescence on the uterine surface, like that which covers the ovum, is decidedly vascular; and it seems that these minute vessels interlock with each other after a certain period, and this so firmly, that they cannot be well separated without rupture. Therefore, should a portion of the ovum be detached in the earlier months, the quantity of blood that will issue will be commensurate with that surface; especially, if it be from the body or fundus. And, as a general rule, it may be said that the quantity of blood which may be expended will be in proportion to the advancement of pregnancy.

SECT. II.—2. *The Causes which may tend to destroy this Connexion.*

If we consult authors upon this subject, we shall find a variety of causes enumerated, as capable of destroying, to a greater or less extent, the connexion between the placenta and uterus—and it is agreed, by far the greater number, that no considerable hemorrhage can occur unless this happen.

In enumerating the remote causes of hemorrhage, I shall only name such as are most generally believed to be capable of this effect, either before or after delivery.

Before delivery: 1st, too short a funis; 2d, mechanical violences; 3d, passions or emotions of the mind; 4th, plethora; and, after delivery, 1st, atony; 2d, spasm; 3d, humoral engorgement; 4th, unequal contraction of the uterus; 5th, inversion.

Though all these causes have been assigned for the diseases we are considering—still, it is sufficiently difficult of explanation how some of them act to produce it. When violence of any kind is offered a pregnant woman, and she miscarry, or is prematurely delivered, the cause, from its force or extent, appears, at first sight, capable of the end; and there all investigation ceases. It may not, therefore, be time ill-spent, to inquire into their respective agencies.

SECT. III.—3. *Mode of Action of certain of the remote Causes.*

And, first, too short a cord. It was the opinion of La Motte, that the cord may be naturally or accidentally too short—and that in either case, it might be the cause of hemorrhage. He gives a case purporting to be illustrative of this assumption—but confesses it was the first, and only one, he ever met with. The bleeding proceeded from one of the umbilical vessels, at a portion which was folded into a kind of knot, and which yielded, from

the accidental shortness of the funis. Levret met with a similar instance. And Baudelocque also mentions a remarkable case of this kind.[1] It must, however, be confessed by all conversant with the practice of midwifery, that though this may be a cause of hemorrhage, it must be a very rare one—or the extensive practice of these three celebrated authors would have furnished more examples.

Secondly, mechanical violence: Thirdly, passions, or emotions of the mind: Fourthly, plethora. Each of these causes may produce uterine hemorrhage; and perhaps all have. However, the mode in which they effect this is not so well understood as it deserves to be—the whole of these causes have one common operation upon the system—they all induce increased force of circulation; and this is generally considered sufficient, under certain circumstances, to produce the evil in question. It has been thought, that whatever gave an increase of force or velocity to the circulatory system of the mother, must almost necessarily, in consequence of the large size of the hypogastric and spermatic arteries; the short distance they have to travel before they arrive at the uterus; and their great increase in that viscus as gestation advances, very much affect the condition of the ovum within its cavity—and that the arterial vis à tergo must act mechanically upon the ovum; and by mere force of circulation drive it from its connexion with the uterus. That plethora must also act after pretty much the same manner—and as a proof of this, it is said, that the periods at which the menses are wont to return, are those at which the abortion is most readily provoked: for, at these times, though the uterus is impregnated, and this discharge has ceased, still the blood is sent in greater abundance than usual, until the demands of the embryo are such as to employ it, without suffering the vessels to become engorged.

Now, if a mere increase of circulation were all that is required to effect this end, no woman would escape aborting, who might labour under high arterial action—thus, fevers of all kinds would be followed by this accident; but this is contrary to all experience. I am obliged, then, to suppose that something more is necessary than an invigorated circulation.

I have said, that something more is required than an increased force of circulation, to effect a separation of the ovum in the early months, or of the placenta in the more advanced periods of pregnancy—and that something I believe to be uterine contraction; as, without this, I am at a loss to understand the *modus agendi* of the remote causes.

I shall not pretend to say how the causes just enumerated in-

[1] Midwifery, par. 1084.

duce this action—though I am certain that this effect is produced through their agency, and for the following reasons: 1st, Because mere circulatory impulse appears from the anatomy of the uterus and ovum to be inadequate to this effect—since neither abortion nor premature delivery follows as a consequence, when this condition has been present in its highest degree.

2dly. Because contraction, in every instance, is essential to the separation of the placenta, whether in cases of abortion, premature labour, or delivery at full time.

3dly. Because we frequently detect this cause, by the presence of pain, hours or sometimes even days, before the eruption of blood; and because, so long as this contraction continues, hemorrhage will not cease, unless we diminish the bulk of the ovum, or interrupt its return by proper remedies.

Where the ovum is about to be cast off, either in the early or later periods of pregnancy, or where there is no chance of its preservation from the effect already produced upon it, contraction becomes useful, though originally the cause of the separation and hemorrhage, as it proves the healthy disposition of the uterus; at least so far as this circumstance is concerned. By it, the ovum is completely separated, and cast off; the bleeding put a stop to, and the woman secured from danger. Contraction and pain are now to be contended with, as well as the bleeding; and these always increase the difficulty of cure.

Therefore, it may not be amiss to inquire how far we may have a control, or whether we have any, over uterine contraction after it has once been called into action. The no small authority of Mr. Burns is against me when I say, I think we have; though confessedly, it is difficult of subjection. Yet, as it is a matter of high consequence to ascertain the truth upon this subject, I hope to be forgiven if I differ from this respectable writer. He says, "When abortion is threatened, the process is very apt to go on to completion, and it is only by interposing *before the expulsive efforts are begun*, that we can be successful in preventing it; for whenever the muscular contraction is *universally established, marked by regular pains, and attempts to distend the cervix and os uteri*, nothing, I believe, can check the process."

That it is a matter of uncertainty whether we succeed in our attempts to arrest uterine contraction after it is "established," must be acknowledged. But that it is never attended by success, I cannot concede; nor should the principle be inculcated, as it paralyzes exertion, and makes us withhold from the suffering female an attempt which rarely fails to give at least comfort. My experience would, I think, in more instances than one, declare that I have been rewarded; and should our attempts fail nineteen times out of twenty, we are surely not justified in with-

holding them. I therefore make it an invariable rule to treat the case as if success were to follow.

There is one case or condition, I acknowledge, with which I never interfere, under the slightest prospect of success; and that is, where the process of gestation has ceased; of the signs of which there is but one absolutely certain; namely, where the breasts have become tender and tumid, and then pretty suddenly subside. It would here be a forlorn hope to administer remedies with a view of retaining the ovum.

I am disposed to believe that this circumstance is the only one which marks the loss of life of the ovum with sufficient certainty; it is perhaps the only one that is unequivocal; since all others may be said to be deceptive. This mark was known to Hippocrates; and has, I believe, ever since his time, stood the test of experience. So long, then, as this sign be absent, I do not relax in my attempts to preserve the ovum. It must, however, be confessed, that I have known the ovum to be cast off, where this symptom was wanting. Yet I am persuaded, in each of these instances, that the ovum preserved its vitality almost to the last moment; and that its expulsion was owing to the indomitable nature of the contractions of the uterus: I think this has obtained most generally with women who are in the habit of miscarrying. I do not stand alone in my opinion upon this subject. Puzos, (Mem. de l'Acad. de Chirur. vol. i. p. 203,) declares, that neither pain nor hemorrhage necessarily produces abortion. La Motte, (Obs. 305,) gives an instance where the woman went her full time, after the orifice of the uterus was considerably dilated. And above all, I may cite Mr. Burns, himself, for an example most strictly in point. (Princip. of Mid. ed. 2d, p. 195, in a note.) He relates, with seeming belief, that cases have occurred of twins, one of which has been expelled, while the other remained, and the "action of gestation," as he happily terms it, was still maintained to the proper period.[1]

Now, this clearly demonstrates that after muscular action has been "universally established," it can be suspended for a considerable time. If this be so, under the circumstance of one fœtus being expelled, and the uterus, by a cessation of action, permit a second to remain until the proper time, I should expect it, à fortiori, when the uterus is not so extensively or so powerfully excited.

The remote causes which I have hitherto been tracing may with propriety be considered as contingent, or accidental in their application and influence. But one still remains to be noticed,

[1] Indeed, our periodical journals have lately, in a number of instances, furnished us with cases, proving that the uterus may expel a fœtus prematurely, and then become passive, until a twin was matured, or in a condition to be expelled with advantage to itself.

which must be regarded as absolute in its effects, whenever it may chance to exist—I allude to the implantation of the placenta over the mouth of the uterus.

The knowledge of this particular location of the placenta is of modern discovery—and, perhaps, Levret is the first who decidedly taught this doctrine. Mauriceau, La Motte, and others before his time, met with the placenta in this situation, but they all believed it was a mere falling down of this mass to the mouth of the uterus, after its entire separation from the fundus.

But when thus placed, flooding is inevitable; for the order of development of the uterus is so uniform, that a deviation can only result from accident, or such a combination of circumstances as very rarely happens: we can then with absolute certainty declare, that when the placenta is unhappily situated over the mouth of the uterus, a flooding towards the latter periods of gestation must happen,—hence the propriety of the term "unavoidable," for this kind of hemorrhage.

During the first six months of utero-gestation, the body and fundus alone yield to the distending power of the ovum: after this time the neck is called upon, (if I may so term it,) for its proportion, as the other parts of this organ seem to refuse any farther supply; in consequence of which, it, in its turn, becomes distended; and, in this act, a portion of the placenta is necessarily removed; and a bleeding, according to the extent of injury, or the number of vessels exposed or ruptured, ensues.

After discharging more or less blood, the hemorrhage may cease; or it may be so reduced in quantity, as to excite little apprehension. But this is a false security—it is sooner or later renewed, either by a farther stretching of the neck, by the augmentation of the ovum, or by the removal of the coagulum, which had until now stopped the bleeding.

In this manner may things proceed, until near the last stage of pregnancy—or the extent of separation may be such, or the size of the vessels exposed be so large, that the woman's life is instantly jeopardized, and from which she can only be protected by the most prompt and efficient remedies.[1]

SECT. IV.—4. *The Periods of Pregnancy at which Hemorrhage may take place.*

There is no period at which hemorrhage may not take place, after the first month of pregnancy; since it is presumable, that after the fourth or fifth week, a union, more or less strict, is

[1] For a particular account of this cause of hemorrhage, and its mode of treatment, see system of Midwifery by the author.

formed between the ovum and the uterus, by means of the chorion and the decidua. It must, therefore, necessarily follow that a separation may be effected, and, if this happen, a bleeding must ensue. Until about the fourth, or between the fourth and the fifth month of gestation, this separation may happen to any portion of the ovum; as, up to this period, the placenta, or what is to become placenta, completely surrounds the ovum.

As a general rule, then, we find the danger from floodings in proportion to the advancement of pregnancy; because the vessels are larger, and will, in a given time, yield a much greater quantity of blood—though the chance of hemorrhage taking place is greater in the earlier months. Puzos says that abortions under the fourth month are rarely fatal; and this observation, perhaps, would be confirmed by the experience of almost every practitioner, provided a sufficiently early attention may have been paid to it.

It must, however, be confessed that it is very difficult to establish any certain rule upon this subject, since I have seen symptoms as alarming attend an abortion of six weeks, as I have witnessed from a premature labour of the seventh month; or, indeed, at any other period. It may, however, with confidence be advanced, that alarming symptoms do not show themselves as quickly in the early as in the latter months; and, of course, we have much more time for the employment of proper remedies.

We shall now consider the mode of treatment. In pursuing my inquiry into this part of my subject, I shall endeavour to be as explicit as the nature of the subject will admit; for I can only establish general principles, and modes of management; as, perhaps, each individual case will present a shade of difference; and the treatment of this shade of difference, whether important or otherwise, must be very much left to the good sense and judgment of the practitioner. I, however, trust, at the same time, that little embarrassment will be experienced, as the indications and their fulfilment will be so distinctly pointed out, as to render the one pretty certain, and the other without much ambiguity.

With a view to perspicuity, I shall divide the consideration of floodings into the several periods at which they may appear, and the remedies into their nature, or supposed mode of action. The peculiarities of each period will be pointed out: by doing which, we can establish more clearly and certainly the mode of treatment. The nature of each remedy shall also be considered, and the period at which it is more especially indicated; together with its mode of action, and the degree of confidence to be placed in it.

In the division of this part of my subject, I shall nearly follow the arrangement of Dr. Denman, as it embraces every essential variety of period at which hemorrhage, as a consequence of utero-gestation, may take place. This will consist of four periods.

1st. That period at which the ovum is entirely surrounded by the decidua and decidua reflexa: this will comprehend the first four or four and a half months of pregnancy. 2d. Into the remaining period of utero-gestation. 3d. Into the period between the birth of the child, and the expulsion of the placenta. 4th. Into the period subsequent to its expulsion.

This division is by no means arbitrary; it is founded upon principles and circumstances that must not carelessly be lost sight of, if we wish either to understand the nature of the disease in question, or become acquainted with its most successful mode of treatment. For instance, until after the time pointed out in our first division, it would be highly improper, under almost any circumstance, to pierce the ovum with a view to the discharge of the liquor amnii; yet, at the second period, it may become an essential remedy. In the third, the woman's safety may depend upon the immediate delivery of the placenta. And the fourth, upon procuring the tonic contraction of the uterus; and each of these distinctions should be well understood, for upon them is the conduct of the practitioner to be regulated.

First Period.

Until the period of four and a half months, or even to the fifth, the ovum, when separated entire from the uterus, appears to be an ovular, spongy, fleshy mass; it bears evidence of attachment to the parietes of the uterus, in every point of its surface—and it would seem to show, that at any one part of this it may be subject to separation; and this separation will necessarily constitute a solution of continuity of more or less vessels; and a consequent hemorrhage. I have just intimated that this separation may be at any point of the ovum; but the effects will be in some measure different, as it may happen near the neck, at the body, or at the fundus of the uterus. If the separation happen at the body or fundus, the blood proceeding from the lesion must increase the mischief, by separating other portions of the connecting medium of the ovum and uterus, before it can issue from the os tincæ; it will, therefore, follow, that when this takes place, the chance of arresting a flooding, and preserving the ovum, must be diminished in proportion to the destruction of the connecting medium. But when the disunion takes place near the neck, the mischief will be less serious, though the discharge may be very abundant.

It has been thought by some that the os tincæ was always soon affected in cases of hemorrhage threatening abortion. But I am disposed to think that the uterus has been supposed to be open merely because clots were expelled from the vagina—but this is by no means a proof of an open condition of the os uteri;

for the coagula are always, perhaps, but certainly much the most frequently, formed in the vagina, when an ovum occupies the cavity of the uterus. Of this the most decisive proof can often be given, in the very early months of pregnancy, by a mere survey of the size of an expelled coagulum; for many times, it is five or six times the bulk of the uterine cavity.

But little information can be derived from an examination of the state of the uterus in the commencement of a flooding at this time; for the os tincæ may be completely closed for a long time, in some instances, though the ovum may be eventually cast off; while in others, it may be naturally a little open, without offering additional risk to the embryo.

But I may safely declare, when the neck of the uterus is distended, so as to resemble in feel the extremity of an egg, that abortion will sooner or later take place, however small the opening of the os tincæ may be. In this case the uterus is thrown into complete action, and the extension of the neck of the uterus, just spoken of, is the effect of these contractions. There is another mark equally unequivocal; and to which it may be proper now to advert, namely, the cessation of morning sickness; a diminution of the abdominal tumour; but, above all, the mammæ becoming painful and distended with milk, and these pretty quickly followed by flaccid breasts. In both of these cases, all attempts to save the ovum will be unavailing; and our whole care must be directed to the state of the flooding.

Nor is the quantity of blood expended, in itself, however excessive, positive evidence that abortion will take place; especially when unaccompanied by pain—for I have repeatedly seen a very large waste, without any other evil attending; while, on the contrary, I have witnessed the expulsion of the ovum with the loss of a very few ounces, when accompanied by pain.[1] As a general rule, perhaps, it may be said that flooding following any violence, more certainly ends in abortion, than those which come on silently and slowly, without any apparent cause.

No reliance should be placed upon the opinion, that a moderate discharge of blood from the vagina during pregnancy, is useful by removing topical plethora.[2] On the contrary, we should look upon every appearance of this kind with great suspicion, and treat it as if it were to become decidedly mischievous. Therefore every sanguineous discharge from the vagina of a pregnant woman should be treated with the utmost care—all the essential

[1] Pain accompanying flooding should not make us abate our endeavours to save the ovum, but under the circumstances stated above, for I have seen it preserved; while I have witnessed several instances of ova being cast off, where neither pain nor flooding accompanied the expulsion.

[2] Kok says that local plethora is a cause of hemorrhage. (See Pasta, p. 275.)

indications for hemorrhage should be instantly complied with; and no time should be lost by temporizing.

The essential indications are, 1st, to arrest the bleeding; 2d, subdue pain, if present; and, 3d, prevent a recurrence of the hemorrhage.

These three points are constantly to be kept in view, as the preservation of the ovum, or even of the woman, is dependent upon their fulfilment. Therefore, whenever a woman is attacked with hemorrhage from the uterus, the sooner it be arrested the better: every known remedy of efficacy is to be employed in succession, should the antecedent ones fail of success; and every advantage must be given to these means, by the patient and her attendants, by a strict adherence to the directions enjoined. It would be in vain for the physician to prescribe, if either the patient or attendants run counter to his instructions; and in no case, perhaps, is their observance of more decided consequence than in the complaint we are now considering.

One of the first steps to be taken is to command the most perfect possible rest of body and of mind. The patient should be placed upon a mattress, sacking-bottom, or even the floor, in preference to a feather-bed. The room should be well ventilated; the patient very thinly covered; her drinks, toast-water, cold balm-tea, lemonade, ice-water, &c.—No stimulating substance of any kind should be permitted. Care should be taken, even in the administration of food and of drinks, that the patient does not exert herself to receive them; she should be strictly confined to a horizontal position. Her food should be of the same general character as her drinks—such as thin sago, tapioca, gruel, or panada—in neither of these should wine, or any other liquor, find admission; they can be rendered agreeable by lemon juice, sugar, or nutmeg. All animal food, or the juices of them, in the commencement of a flooding, should be forbidden. Let whatever is given, be given cool. Absolute rest of every member of the body should be enjoined.

The officiousness of nurses and of friends very often thwarts the best directed measure of the physician, by an overweening desire to make the patient "comfortable." This consists in changing of cloths, "putting the bed to rights," or altering her position. All this should be strictly forbidden. Conversation should be prohibited the patient; and all *company* excluded. Much mischief is sometimes done by the talking of the by-standers; for they, for the most part, delight in the marvellous, and relate the histories of cases every way calculated to appal the already too much alarmed patient. This kind of gossiping should be peremptorily forbidden, even at the risk of giving offence, rather than permitted, to the certain injury of the sick.

Having established a proper system for the repose of the pa-

tient, and the government of the attendants, we should next determine the propriety of blood-letting—this becomes very often of high importance; especially at this division of our subject: plethora is a usual attendant at this time; nay, may be, as I have hinted above, the very cause of the alarm. Blood should be taken from the arm in a quantity proportionate to the force of the arterial system; remembering we do little or no good by the operation, if we do not decidedly diminish the force of its action; let the pulse rather sink under the finger than otherwise; its repetition must be regulated by circumstances; recollecting, however, that hemorrhage is sometimes maintained solely by exalted arterial action; as the following case will very clearly show.

I was called to Mrs. B. in January, 1796, whom I found much exhausted by uterine hemorrhage, in the fourth month of gestation. She had several days previous to my visit, returns of flooding, which were little attended to. The usual means were now employed, and for the time, the discharge was arrested; this was early in the morning of the 16th. She remained very well until 5 o'clock, P. M. At this time she had a return of flooding: I was instantly sent for; and, living but a few steps from the patient, was very quickly at her bed-side. She was found to be flooding very rapidly; the pulse was very active; and the eruption of blood appeared to have been preceded by a slight rigour, followed by high arterial action; she was instantly bled from the arm, until there was a reduction in the force and frequency of the pulse; and the abdomen covered with ice and snow. So soon as this took place, there was an abatement of the discharge; this condition was followed by slight alternate pains in the back, shooting towards the pubes. Forty-five drops of laudanum were now given; and strict injunctions left, that the patient should be kept as quiet as possible: and in case of return of the flooding, that I might be instantly apprized of it. 17th, A. M. The patient was found free from fever, and almost free from discharge; she continued so until about 5 o'clock, P. M., when the whole scene, as mentioned before, was renewed; she was again bled; subjected to the application of the ice: and the laudanum was repeated for the same reasons as yesterday. 18th, A. M., 8 o'clock, I was called suddenly to my patient, as she again had a return of fever, with hemorrhage: she was again bled, &c.

In this manner did matters proceed for several days; it was now found, that the arterial exacerbations observed no regular period; but whenever they did occur, there was uniformly a return of the flooding; and would continue during this state of excitement. With a view to interrupt this condition, or to abridge it as much as possible, I placed a young gentleman at the patient's bed-side, with orders to bleed her the moment he perceived an increase of pulse; this was accordingly done; and from each bleed-

ing decided advantage was discovered. The loss of five or six ounces of blood was sure to put a stop to the uterine discharge, in the course of a few minutes; and sometimes would prevent its appearance, when it could be very promptly used. By proceeding in this manner until the 23d, the patient was entirely freed from this distressing complaint. She was bled seventeen times; and lost, by computation, one hundred and ten ounces of blood in the course of seven days. She gradually gathered strength, and was safely delivered at the proper time.

The acetate of lead should now be given, in doses and frequency proportionate to the extent of the discharge. From two to three grains may be given, guarded with opium, every half hour, or less frequently, as circumstances may direct; or in case the stomach be irritable, a very efficient mode of exhibiting it is, per anum—twenty or thirty grains may be dissolved in a gill of water, to which must be added a drachm of laudanum, and this be repeated, pro re nata; or we may give the extract of rhatany with great advantage, in the manner already recommended at p. 143, only the quantity should be repeated every hour or two.

If pain attend, opium should be given until a decided impression be made upon the uterine contractions; or until its exhibition appears to be totally unavailing. Should the discharge be profuse, the application of equal parts of cold vinegar, and spirit of any kind may be applied to the region of the pubes; or what is still better, a large bladder, two-thirds filled with ice and water: the tampon should be introduced without farther delay.

For the discharge from the uterus, when very profuse, will not always yield to these remedies; and if it do not, it will very soon become highly alarming. To save even a few ounces of blood, is always desirable; and sometimes it is highly important; should the means just recommended fail in moderating, or stopping the threatened symptoms, no time should be lost in employing the tampon. The best, I believe, is a piece of fine sponge of sufficient size to fill the vagina. It should have pretty sharp vinegar squeezed from it several times, with a view to clean it, and to have it imbued with this acid; it may then be introduced into the vagina, and suffered to remain until its object is answered.

Previously, however, to the introduction of the sponge, it will be well to examine the state of the neck of the uterus and the os tincæ; their condition will very much govern our decision and prognostics. Should the one be found entirely closed, and the other of its original shape, we may, notwithstanding the profuseness of the discharge, and even the presence of pain, still entertain a rational hope of preserving the ovum; but if, on the contrary, the form of the neck be altered, and the mouth opened, we are pretty certain it will sooner or later be cast off. But neither

of these conditions is to affect our conduct, as regards the hemorrhage; for this is to be stanched, though we are certain the embryo will be lost.

Much error is sometimes committed, under an impression that the ovum must be expelled; and that nothing can be done advantageously for the woman, until this be effected. I have known a hemorrhage suffered to continue, almost to the exhaustion of the patient, because pain was considered essential to the throwing off the ovum, though on each return of it a large coagulum has been expelled; or the discharge has been augmented by injudicious manual attempts to aid the expulsion of the ovum. Both of these mistaken methods cannot be too severely reprehended—one for blameable supineness; and the other, for rash interference.

Whatever may be the rapidity of the discharge in such cases, it is ever under command, so far as my experience will warrant the assertion, by the use of the tampon. This should be instantly resorted to; and its effects will be quickly perceived.[1]

I deprecate with much earnestness, frequent and unnecessary touching. This is not only injurious, by fatiguing the patient, but by removing coagula, that may be important to the stopping of the hemorrhage. This should, therefore, always be avoided; except at such times as it may become necessary to ascertain whether the mouth of the uterus be yielding to the influence of pain. It therefore can only be necessary in such cases as are, or have been accompanied by uterine contractions.

I also must seriously forbid all attempts to remove the ovum so long as the greater part of its bulk is within the cavity of the womb; lest its covering be broken, and the liquor amnii evacuated. We must let no false theory get the better of multiplied experience: all the latter goes to prove the impropriety of such a procedure; for it is agreed by the most enlightened upon this subject, that it is mischievous to effect it, and unfortunate, when it spontaneously happens. The reason is obvious. The embryo is expelled, but its involucrum is retained; in consequence of which, the flooding is perpetuated, and much pain, and other inconvenience, if not danger, are experienced, before it is thrown off from the uterus. I must therefore repeat it as a rule, that the ovum is never to be pierced before the commencement of the fifth month,[2] unless the flooding is very profuse, the pains very urgent, and the os uteri pretty well opened.

[1] Dr. Meigs informed me, however, of a case that fell under his notice, in which the discharge continued in an alarming quantity, though a tampon had been employed. In such a case it might be well to make a piece of sponge occupy the os externum completely, and its escape prevented by continued pressure against it with the hand.

[2] Burton, and some others, advise the rupturing of the ovum even at the second month—than this, nothing can be less conformable to either sound reasoning or good practice.

In this advice I depart from the very high authority of Baudelocque, with whom it is not very safe to differ: he recommends this to be done always after the third month; provided the membranes do not tear of themselves. But very ample experience has convinced me, that it is safer to preserve them so long as the os uteri remains closed, be the pains ever so frequent or powerful, or the flooding ever so profuse; for the one may be diminished by opium, and the other arrested by the tampon. And if no pain attend, it almost becomes criminal to do so; since the ovum may, by the use of the tampon and the other remedies above suggested, be preserved.

I have ever found, in such cases, that much effort is required to expel the secundines; nor will we be much surprised at this, when we recollect the strong disposition the mouth of the uterus has to close itself at this period of utero-gestation. Indeed, I have repeatedly witnessed most alarming floodings from the placenta engaging in the mouth of the uterus, and am certain that they arose from the presence of the placenta, as the discharge always ceased so soon as this mass was removed.

When the hemorrhage is contained in this manner, the placenta should be removed as quickly as possible; but this is the difficulty. At the early periods of pregnancy, (those comprehended within the first five months,) the uterine cavity is too small to admit the hand, or even a couple of fingers; indeed, sometimes, not even one; therefore, any attempt to deliver it by the hand alone, must almost always fail. If this mass be entirely within the uterus, or even nearly so, the os uteri will be found most generally, so much closed, even at the fifth month, as to prevent the introduction of the finger to hook down the placenta; and as we descend from this to the second month, or lower, it will certainly be so small, as to prevent the intromission of even one.

Whenever this is attempted, (especially by the experienced,) it is almost sure to end in disappointment. Sometimes a portion of the placenta is felt without the os tincæ; and should its greater bulk be so situated, we can sometimes remove the whole, by pressing it between two fingers, and withdrawing it; and thus put a stop to the discharge; but it is rare that we are so fortunate.[1]

In such cases, I have employed, with the most entire success, a small wire crotchet. This instrument is very simple in its construction, as well as in its mode of action.[2]

[1] From some late experience, I am induced to believe, that the ergot, if given at this time, will often supersede the necessity of the "crotchet." It must, however, be borne in mind, that it is only in cases in which we cannot command the removal of the placenta by the fingers—that is, where this mass continues to occupy the uterine cavity, or but very little protruded through the os tincæ.

[2] The drawing I have given of this instrument is upon a reduced scale; the reduction is one-third. I consider this much more simple than the pince à faux

The manner of using it is as follows:—The forefinger of the right hand is to be placed within, or at the edge of the os tincæ; with the left, the hooked extremity of the crotchet is conducted along the finger, until it be within the uterus; it is now to be gently carried up to the fundus, and then slowly drawn downwards, which makes its curved point fix in the placenta: when thus engaged, it is gradually drawn downwards, and the placenta with it. The discharge instantly ceased, in every case in which I have used it. In all the instances to which I here refer, I am persuaded the women's lives were saved. In illustration of what I have just urged, I will relate one of the cases of the several that have fallen immediately within my notice. I was called to Mrs. H——, on the third of August, 1807; she was at the third month of pregnancy, and was flooding violently; pains were frequent and severe; large doses of the acetate of lead and opium were ordered, together with cold applications externally—the mouth of the uterus was a little open; the ovum protruding; quiet, cold drinks, &c. were ordered. I now left my patient, and returned at twelve o'clock, three hours after the first visit—the hemorrhage not abated; pains increased; the os tincæ more dilated, and the ovum more tangible. At three o'clock, P. M., the ovum opened spontaneously, and the embryo escaped—flooding violent; pains trifling; syncopes frequent; pulse very small and quick; the placenta in part engaged in the os uteri—a stimulating injection was ordered, with a hope it would bring away the placenta. Four o'clock, P. M., the injection failed in the object for which it was given; hemorrhage continues; syncopes frequent; pulse scarcely perceptible. The placenta was now removed by the wire crotchet; the flooding ceased instantly; the subsequent symptoms were very mild.

Sometimes, when the ovum has opened, and the embryo escaped, but has left its involucrum behind, the hemorrhage may not be violent, but may be of long continuance; at least it will be as long as this mass remains. In such cases where time is not so precious to the safety of the woman, I have, in several instances of this kind, administered the ergot in twenty-grain doses, with very decided and prompt advantage.

The peculiarity of this period consists in the ovum not having the transparent membranes formed; and the practice founded upon this, as a general rule, is never to break the walls of it.

germe, as proposed by Levret, and recommended by Leroux and Baudelocque; or that of Burton, for the same purpose.

Second Period.

This comprises all the time from the fourth and a-half, or the fifth month, to the entire completion of utero-gestation.

The woman is liable to hemorrhage during any part of this period, by the action of any of the remote causes already enumerated; and in proportion to the advancement of pregnancy, will be the risk from flooding, as the quantity of blood thrown out in a given time is, cæteris paribus, greater and more difficult to arrest. Therefore, when a woman is attacked with a discharge of this kind, however moderate it may be in the commencement, we have no security against its increase, at any after-moment—she is to be carefully watched, and most fully advised. We should insist upon compliance with the rules directed for the first period, and we must employ the remedies already proposed, as early as the nature of the case may require.

I have already intimated, that a hemorrhage from the uterus during pregnancy, can only happen from a portion of the placenta being detached. It will follow that the issue of blood will be in proportion to the extent of surface so exposed; to the advancement of pregnancy and the force of the circulation. Now as the advancement of pregnancy is greater in this, our second division, than in the first, the chances for a more profuse discharge of blood are increased in an equal proportion: hence it is agreed upon all hands, that the risk the woman runs is very great; so great, indeed, sometimes, as to be very speedily fatal; since we can have no influence over the extent of separation of the placenta, nor always have control over the force of arterial action.

The indications, however, are precisely the same as for the "first period;" but their fulfilment is not always effected after the same manner.

It is my practice, in cases of a threatened flooding, during pregnancy, or when from the rapidity of the discharge the woman's strength would be quickly exhausted, to use, in addition to the means just mentioned, the tampon. I have already said, I have found fine sponge the best; but where this cannot be procured, fine flax, or very well picked tow, or old linen, may be substituted.

When the latter substances are chosen, they should be used in portions of moderate size, and well moistened with sweet oil, or melted lard—they should be introduced one by one, until the vagina is completely filled; the whole may be secured by a compress and T bandage. This latter precaution is not necessary when a sponge is used, if the piece be of proper size. From its compressibility, it is introduced without the least inconvenience,

if previously prepared as directed; and I believe it promotes coagulation quicker than any other substance, from its numerous cells giving speedy passage to the finer parts of the blood. It almost instantly puts a stop to the hemorrhage; and in some instances, I believe I was entirely indebted to it for the preservation of the lives of my patients.

Some object to the employment of the tampon; they say there is danger of local inflammation from the use of vinegar: but experience has proved it to be futile.

The mode of action of the tampon in stopping hemorrhage is precisely the one nature employs, when she alone effects this end. A coagulum is formed from the tampon to the mouth of the bleeding vessels, and thus puts a stop to, or very much diminishes, the farther issue of blood. It would seem, from all we know upon this subject, that there is a strong disposition in the cut or divided extremity of a blood vessel when at rest, or nearly at rest, to form a coagulum within itself, for the purpose of putting an end to the farther issue of blood; hence, the importance of coagula at the mouths of the bleeding arteries; the formation of which is the first step towards spontaneous suppression. Puzos,[1] many years since, had pretty nearly the same notion upon this subject; he said, that the coagula acted as corks to the mouths of the bleeding vessels.

The internal remedies for the suppression of uterine hemorrhage, when successful, must act by disposing the blood to coagulate more speedily; or immediately, upon the open extremities of the bleeding vessels, so as to induce them to contract. Hence, the almost universal employment of that class of medicines called astringents. Leroux,[2] however, forbids them in uterine hemorrhage, after delivery; but he does this upon a wrong principle. He says, "Dans l'hæmorrhagie uterine violente qui succéde à l'accouchment, ils ne peuvent être d'aucune utilité. Pour s'en convaincre, il suffit de se représenter la route qu'ils sont obligés, de suivre avant de parvenir ou lieu aù leur pourrait être utile, le temps qu'ils mettent à parcourir ce trajet, et les changemens qu'ils éprouvent avant d'y arriver."

In like manner, from their mode of action, Leake[3] objects to the use of astringents or styptics in this complaint; and upon no better ground, I think, than Leroux; for I know that certain of

[1] "Ces sages précautions ont suspendu souvent, et quelquefois ont fait cesser des pertes de sang accompagnées de petits caillots; non pas en soudant, pour ainsi dire, à l'interieur de la matrice les portions du placenta séparées, mais en donnant le temps au sang arrêtè à l'embouchure des vaisseaux de'sy cailleboter, et d'y former de petis bouchons moulés sur leur diamètre capables d'arrêter le sang." (Mem. de l'Acad. tom. i. p. 211.)

[2] Observations, &c. p. 209.

[3] On Child-bed Fever, vol. ii, p. 301.

them, as the sugar of lead, (especially,) produces sometimes the most decided and prompt effects, let its mode of action be what it may.

In many instances, it exerts a control over the bleeding vessels, as sudden as the ergot does upon the uterine fibre; and, from the extent and certainty of this action, we might be tempted, without doing much violence to the delicacy of medical speculation, to call its action specific. In a word, we may justly question, whether any internal remedy can be successful in uterine hemorrhage, which does not exert an action somewhat specific.

But neither internal remedies nor external applications should be exclusively relied upon, longer than is decidedly consistent with the safety of the patient; for neither astringents of any kind, nor the tampon, can be availing in all cases; and when they fail, there is but one resource, namely delivery; the consideration of which brings us to the other modes employed by a large class of practitioners, for stopping uterine hemorrhage; namely, those who consider delivery the only resource.

Sect. V.—*Delivery considered as a Mode of arresting Hemorrhage.*

From the time of Mauriceau and Dionis to the present moment, the number belonging to this class is very considerable; and if numbers merely were to be considered, the weight of evidence would be in favour of their practice. The want of proper knowledge in treating uterine hemorrhage by other means; the fatal rapidity of its termination sometimes, where rupturing of the membranes, or delivery, was not performed, or where a feeble plan had been pursued: the occasional success of delivery, together with the strong probability of uterine contraction after this organ is emptied, and the influence of this contraction in arresting the bleeding, has but too easily, and too generally, found advocates for its almost exclusive employment. Thus, La Motte[1] thought it impossible to restrain hemorrhage, when the placenta was detached in part or entirely, but by the extraction of this mass; Dionis declared we should not defer the delivery of the fœtus, if blood in great quantity and without interruption escaped from the uterus.[2] Mesnard advised delivery, if there was a flooding sufficient to cause fainting;[3] and Heister[4] and Puzos[4] were of the same opinion, &c., &c.; for it would be easy to multiply authorities, to considerable extent, to the same end.

[1] Traite des Accouchemens, Obs. 216.
[2] Des Operations, p. 249.
[3] Pasta, p. 170.
[4] Surgery, part ii. p. 257.
[4] Mem. de l'Acad. vol. i. p. 224.

The advocates for delivery, as the only means of arresting hemorrhage, may be divided into two classes; first, those who paid no regard to the condition of the uterus when the operation was undertaken. The second, those who evacuated the liquor amnii previously to delivery, with a view to promote the contraction of the uterus, and by this means put a stop to the flooding; the latter may be subdivided into three: 1st. Those who did not regard the situation of the os tincæ, when they ruptured the membranes; and if this operation did not immediately succeed, entered the uterus with the hand, by forced means, and immediately effected the delivery. 2d. Those who, having torn the membranes and gained the feet, were contented to bring them to the orifice of the uterus, and then trust to the natural efforts to perform the delivery. 3d. Those who never pierced the membranes but when the mouth of the uterus was either dilated or dilatable; and who, after rupturing them, permitted them to escape gradually, and finish the delivery slowly, or waited for the efforts of nature.

From the improvements which midwifery has received within the last fifty years, I should not have expected to meet with an advocate for indiscriminate delivery, at the present day; yet in Meygrier we find that advocate. That the most mischievous consequences have followed the practice of those who compose the first class,[1] we have the authority of Pasta,[2] who deprecates the practice as both cruel and dangerous; of Kok,[3] who says he has seen it followed by inflammation of the womb; of Leroux,[4] who declares it to be dangerous to both mother and child; of Baudelocque,[5] who insists that nothing can justify the accoucheur, who persists to deliver while the neck of the uterus retains its natural thickness and firmness. And I may add my own experience, as I once witnessed death as the consequence of such a proceeding.

The method pursued by those of the first division of the second class, is not free from serious inconveniences, and is, perhaps, scarcely inferior to the first, as the same violence must almost necessarily be committed. The plan of the second division of the second class, (which I shall, in conformity with custom, call Puzos' method,) is far from being the one most conformable to the principles of the art: since, in its performance, *great* violence is frequently obliged to be resorted to.

[1] Among the first class, may be reckoned all the accoucheurs prior to the time of Mauriceau. To the second class, and the first division of that class, belong Mauriceau, Dionis, La Motte, Deventer, &c. &c. To the second division, we may place Puzos, Smellie, Delourie, &c. &c. And to the third, we have Leroux, and most of the late writers upon midwifery.

[2] Vol. i. p. 132.

[3] Pasta, p. 276.

[4] P. 241.

[5] Vol. ii. p. 90.

The objections to this scheme are, 1st, that every flooding during pregnancy is not necessarily followed by delivery; but if we adopt this method, it must, within a short period, take place, and this, perhaps, to the destruction of the fœtus.

2d. Because the mouth of the uterus may be so placed as to render this operation very difficult, if not impossible; especially when the uterine orifice is still very thick and rigid; for Puzos[1] himself confesses he was an hour or more before he could pierce the membranes; and this was a loss of most precious time to the patient, as the flooding still went on, and he began to despair of the success of his method, from the excessive loss of blood, and was fearful he should be obliged to have recourse to forced delivery.

3d. That the hemorrhage does not always cease after the rupture of the membranes; but, on the contrary, sometimes becomes more violent at this operation.

4th. That the presentation of the child, if it be preternatural, and the presence of the placenta over the mouth of the uterus, will render this method ineligible.

5th. It is sometimes impossible to make a forced delivery; especially from the fifth to the sixth and a half month; of this La Motte[2] gives one example, and Smellie[3] another—and I once saw a similar failure. And, above all, they have not pointed out any alternative when this plan shall have failed.

It is only upon the method of those who compose the third division of the second class, or those who never pierce the membranes but when the os uteri is dilated or dilatable, that we can safely place reliance, in cases of severe flooding.

It may be asked, what are we to do in cases of profuse hemorrhage, at any period from the fifth month to the full time, when the discharge threatens the life of the patient, and when the os uteri is closed and rigid? Are we supinely to witness her death, rather than employ some violence to relieve her? Certainly not. If there really were no other remedy, forced delivery, with all its disastrous consequences, might be justifiable; but as we have the power of plugging the vagina, and preventing the farther issue of blood, we should have immediate recourse to it: and this plan, so far as I have witnessed, has not failed; and this experience is so supported by that of Leroux, as to entitle it to entire confidence. By this means, time is permitted to the natural agents of delivery for the performance of their duties; and this is done, for the most part, with both certainty and success.

The importance of the tampon is, perhaps, never so clearly

[1] Mem. sur. les Pertes, &c. p. 336.
[2] Obs. 452.
[3] Collect. 33, No. 2, Ob. 1.

demonstrated, as when it is employed in cases where the flooding has proceeded to almost complete exhaustion, and where every ounce of blood is of immense value. In such cases, (before delivery,) I have seen it arrest a profuse flow in almost a moment, and where the farther loss of a few ounces must have been followed by death. Syncope, and even convulsions, have ceased upon its application.

Though it be confessed that after the failure of the remedies recommended for the suppression of hemorrhage, as the application of the tampon, &c., there is but one means left in our possession, (namely, delivery,) by which the flooding can be arrested, and the life of the woman preserved,—yet it may be asked, is there no condition of the patient, in which it would be improper to attempt this, besides the rigidity of the os uteri? To this, I answer, yes,—I would say, that a woman reduced to the last extremity of weakness, but with a suspension of the discharge, should not be meddled with, so long as the hemorrhage is kept in check.

But suppose the same degree of weakness, with a continuance of the flooding, to exist; should we, in such case, attempt delivery? I have no hesitation in answering this in the affirmative:—but, previously to the operation, the condition of the patient should be candidly stated to her friends: it must be undisguisedly declared to them, that no undue calculation should be made of the benefit of delivery; but, as this operation offers the only possible chance of relief, it might be adopted. We may be encouraged to do this, as it now and then happens, that the woman recovers, under such circumstances, contrary to all expectation.

Hitherto, I have said nothing of opium as a remedy in uterine hemorrhage; the reason is simply this—it has never merited the smallest commendation in my hands; for it has never been attended with the slightest success; of course, I cannot be of opinion, that it deserves the encomiums which have been so lavishly bestowed upon it by Dr. Hamilton and others. I have read, dispassionately, and with care, Dr. Stewart's book upon this subject; and have cautiously examined the cases detailed by him; but they have not afforded me the slightest ground to believe that the opium had any agency in arresting the floodings for which it had been so liberally administered: the cessation uniformly appeared to be the result of the natural powers of the system in general, and of the uterus in particular. That it is sometimes beneficial, previous to delivery, in allaying pain, and in this way putting a stop to farther mischief, I most freely confess; but I cannot yield any thing more. I am not alone in this respect: Dr. Denman seemed to entertain the same opinion; and Barlow has advanced similar sentiments.

It may be proper to say a few words upon the subject of cold

applications, as no remedy has been more extensively employed, or more constantly abused. Cold, as a means to arrest flooding, is in almost universal employment, is usually one of the first resorted to, and the last that is abandoned—it has acquired so much popularity among the vulgar, as to render it unsafe for the reputation of the practitioner, who has omitted it in his treatment of this complaint.

But, though confessedly an agent of great power, it has nevertheless its limits of usefulness; and beyond which, it should never be urged—for its efficacy is very much confined to its influence over the circulating system, by diminishing its vigour, and abating its velocity, though it may also act as a stimulant to the uterus when its shock is first perceived, and thus induce contraction; but its greatest value seems to be in controlling arterial action. After these ends are answered, it is truly doubtful whether it should be farther persevered in; at least its utility is very much diminished.

I employ it very liberally; and sometimes, if the case be urgent, even at a very low temperature—in general, the best mode of applying it, is by a large bladder, as has already been directed—but, in very sudden and alarming cases, I have caused it to be teemed from a height upon the abdomen; and this method of using cold, from its promptness, and the extent of its effects, has a very decided preference.

But if the pulse flag, and the woman be much exhausted, I not only forbid it, but have a warm blanket, or other warm articles, to supply its place. During the use of cold water, &c., to the abdomen, warm applications should be made to the feet and legs; a bottle or jug of warm water, well corked, is one of the best and most handy: this last direction should never be omitted when the feet and legs are preternaturally cold. We, also, should be particularly careful not to wet the bed and clothes of the patient, if it can be possibly avoided, as it creates much inconvenience, by rendering her situation extremely unpleasant, besides obliging her to be disturbed, that dry things may be substituted.

The injecting of cold water, cold alum-water, the solution of the acetate of lead, the introduction of ice into the vagina, and even into the uterus, &c., have been practised; and, it it said, with advantage. The merits of such applications must rest upon the authority of those who recommend them; for I confess I have no experience in either of them; nor should I be tempted to rely upon them in very pressing cases.[1]

It may be proper to observe, in addition to the remedies and modes of proceeding pointed out in this division of our subject,

[1] See chap. on "Unavoidable Uterine Hemorrhage," in the author's System of Midwifery, for a variety of means lately proposed for the relief of hemorrhage.

that in certain cases of uterine hemorrhage, the forceps are the only means to be employed or relied upon. They are exclusively indicated, 1st, Where the discharge is threatening, and the labour well advanced; but where the membranes have been long ruptured, and the uterus is firmly embracing the body of the child, or the head does not advance with sufficient rapidity to afford security. 2d, Where the head is low in the pelvis, and has escaped from the orifice of the uterus—in this case, turning must not be thought of, however recent may have been the escape of the waters; or however moveable the head may be in the pelvis. 3dly, Where the uterine efforts are either feeble, or suspended; and where the os uteri is sufficiently distended, but where the waters have been long discharged. 4thly, Where the head occupies the inferior strait; the orifice of the uterus sufficiently expanded; the waters either recently or a long time expended; but where the natural agents of delivery would act too slowly for the safety of the patient.[1] 5thly, Where the natural powers are incompetent to the sufficiently speedy delivery of the patient; owing either to the *mal*-position of the head, or to such a disparity between it and the pelvis, as shall prevent its timely expulsion.

CHAPTER XVII.

HYSTERITIS, OR INFLAMMATION OF THE UTERUS.

THERE is more ambiguity, or at least a greater want of precision, in the accounts of the acute diseases which attack the puerperal woman, than in any others whatever. This does not arise from an absolute necessity; for they are neither obscure nor numerous. Those which attack the uterine system and its dependencies, have chiefly created the confusion; and this has mainly arisen from an overweening desire for great accuracy of distinction, without a corresponding power to give the signs by which each should be ascertained. Or in some instances, from a blameable generalization, making every febrile affection puerperal fever.

Thus, the disease now under consideration has almost always been confounded with puerperal fever; and the latter as frequently blended with the former: this has arisen almost entirely

[1] From late experience, we have reason to believe that the secale cornutum may, occasionally, supersede the necessity of the forceps in this case: it should, at all events, be tried.

from not allowing that puerperal fever is an inflammation of some one portion or the whole of the peritoneum; and in not thinking, or believing, that the proper substance of the uterus can be inflamed without necessarily involving this membrane; though the latter may become so secondarily. On this account it will be proper to divide hysteritis into two species; the first we shall call the simple or pure; the second, the mixed or accidental inflammation of the peritoneum, or superadded puerperal fever. The first we shall define to be an inflammation of all or any portion of the proper substance of the uterus, except its peritoneal covering. The second where the latter is implicated with the former. It has been rendered highly probable, from the late observations of Mr. Dance, and M. Tonnellé, that in hysteritis it is the veins of the uterus that are inflamed, and constituting a genuine phlebitis. Dr. Conquest says, "The substance of the uterus is sometimes infiltrated with pus, and becomes livid and spongy, or it may contain small abscesses; and the uterine veins, particularly those containing blood from the spermatic arteries, may be inflamed, and contain coagula or pus." Obs. on Puerp. Inflam. And M. Tonnellé says if proper care be not taken in dissection, it will be supposed abscesses of the proper tissue exist, when the vessels are only affected.

Sect. I.—Species 1.—*Causes.*

The causes which may produce inflammation of the uterus are all or any of the violences to which this organ may be exposed in the exercise of its functional powers, during the expulsion of the child; from those to which extrinsic aid may give rise, when its powers have been insufficient for the purposes of delivery; from those which may arise from the artificial delivery of the placenta; or those which may act independently of either, but not readily cognizable.

Under the first head we reckon, 1st, the long and reiterated efforts the uterus is occasionally forced to make to overcome the resistance which opposes the expulsion of the child; whether this arise from the rigidity of the neck of the uterus; or of the external soft parts; the construction of the pelvis; or the size or situation of the child.

2d. To violences committed in the use of instruments of any kind; to injuries sustained in the act of turning; or to ill-directed manœuvres executed on the neck of the uterus in attempting its dilatation, or by too frequent handling.

3d. To lesions of the internal face of this organ, from a sudden, rude and unnecessary interference in the separation of the

placenta; or to the injuries it may sustain from a placenta that has been too adherent.

4th. To those which may arise from exposure to cold; checked perspiration; some secret influence of the air; improper regimen, &c.

2. *Symptoms.*

Whichever of the causes may have acted with sufficient force to produce inflammation of the uterus, we find that it generally betrays itself within the first five or six days after delivery.

The woman complains of a pain at the very lower part of the abdomen, which gradually increases or can easily be augmented by pressure made immediately above the symphysis pubis. It is also increased by any motion which may disturb the repose of the uterus, as turning in bed; sitting up; passing of water; or going to stool.

If the fingers be made to press upon the uterus externally, it will be pretty readily distinguished by its size being greater than is usual at such a period after delivery; by its hardness, (which is very resisting,) and by its unusual tenderness.

The pain which the woman feels is constant; or it may be occasionally lancinating; but it is always greatest when the uterus contracts and produces after-pains. From the after-pains with which it is sometimes confounded, it may be distinguished by the latter being always alternate; and when the contractions subside which produce them, the woman is altogether free from pain, until they are again renewed.

There is no swelling of the abdomen in the commencement of this disease, unless it arise from the augmented size of the uterus itself; but which is never so great at the onset of the complaint as to make it conspicuous. The abdomen does not participate in the slightest degree with the uterus, in simple hysteritis; hence there is none of that tenderness which is witnessed in peritoneal inflammation, or puerperal fever.

Sometimes there is a frequent desire to make water, attended with more or less pain: or there may be a retention of urine; especially if mechanical aid has been required to effect the delivery; and the passing of water is accompanied by a sense of heat or burning in the urethra and vulva.

The urine is almost always high-coloured; generally scanty, and will deposite a lateritious sediment. In judging of the urine, however, we must take care that the mingling of the uterine discharges with it be not mistaken for the tone of colour of the urine itself.

3. *Constitutional Symptoms.*

The symptoms which we have just enumerated may be looked upon as strictly local, and such as would necessarily arise from an inflamed condition of the uterus; but these symptoms exist but a short time independently of constitutional disturbance.

Soon after pain, &c., as above described, is felt, we find the heat of the body very much increased, without, for the most part, the interposition of "chill." The head becomes painful, the face flushed, and very frequently there is delirium,[1] if the febrile irritation be not soon relieved.

The tongue is white, much loaded, and Dr. Clarke says dry; but this we have never witnessed at the beginning of the disease. It is true there is less moisture than is usual in the mouth, and the little fluid there is, is more clammy than is common in fevers of an ordinary kind. This creates a great, and sometimes almost an insatiable thirst.

The pulse is full, strong, and hard; its frequency is not very great; rarely a hundred.[2] Dr. Clarke says, from one hundred to a hundred and twenty strokes in a minute. This we have never seen in the simple hysteritis; nor does it become so, unless the disease is running on to a fatal termination.

The stomach, we believe, is never much affected in the beginning of the disease; certainly never, or but very rarely, provoked to vomiting.

As the disease progresses, or rather as soon as the constitutional symptoms commence, the pain extends itself to the back, and down the thighs; and sometimes a pretty severe one is felt beneath the lower part of the ribs on the left side.

As the lochia are interrupted to a greater or less extent in inflammation of the uterus, it has been commonly supposed that the disease is produced in consequence of that obstruction. But, as the lochia are nothing but evacuations of the blood, with which the uterus was filled, and with which it will continue to be filled, until the vessels of this organ and their open orifices contract so much as to refuse to transmit more, the lochia must be looked upon as a discharge dependent upon the condition of these vessels, or rather on the degree of contraction of the uterus. Consequently, their being more or less abundant must depend upon the state of the vessels which furnish them; and the state of these

[1] It may be looked upon as almost a character of hysteritis, that delirium almost always attends it; while, in the unmixed puerperal fever, of peritoneal inflammation, it rarely occurs.

[2] This is another peculiarity in hysteritis, as distinguished from peritonitis, and serves to show how much inflammation of particular structures influences the circulating system. There is no instance of pure hysteritis, so far as we have seen, in which the pulse is as quick as it is in puerperal fever.

vessels must necessarily be influenced by other portions of the uterus, by the degree of inflammation. Now, the uterus when inflamed, swells; and this swelling, in consequence of its effect upon the extremities of the exposed vessels, prevents the usual flow of the lochia; and from which two effects are produced: first, an accumulation of blood in the uterine vessels, which stretches them anew; and second, an aggravation of the inflammation from this distention, as well as augmentation of pain.

We may assign another reason, indeed, for the lochia being less abundant at this time; which is, the tonic contraction of the uterus being suspended; consequently, one of the causes by which the lochia are forced through the vessels of the uterus is withdrawn, and the quantity discharged will consequently be less. It must, therefore, follow, that the diminished lochia is but a consequence of this condition of the uterus, and not the cause of it.

It would be as rational to say, because there is a sparing secretion of urine in nephritis, that this scarcity is the cause of the inflammation of the kidneys; or that a diminished quantity of bile is the cause of the inflammation of the liver in hepatitis.

It is true that the lochial discharge is highly important at this time to the uterus itself; since it unloads its vessels, and thus prevents the consequences that would most probably follow its overexertions, as well as promotes the tonic contraction of this organ. But, as their existence altogether depends upon the degree of permeability of the vessels which open within the uterine cavity, their quantity and quality must necessarily be influenced by the condition of these vessels; therefore, the state of the vessels of the uterus may influence the lochia, but the lochia cannot affect the vessels of the uterus; for they are not lochia until discharged from these vessels.

The return of the lochia after they have been arrested, however, is justly considered as a favourable sign; and this circumstance has been urged as an additional argument in favour of their agency in producing this disease. But here the effect is evidently mistaken for the cause. The return of the lochia is only an evidence of the diminished resistance to the flow of blood at the extremities of the uterine vessels; and this lessened resistance is owing to the abatement of the swelling which had interrupted its flow: and the reduction of the swelling is but a consequence of the retiring of the inflammation.

Therefore, the lochia being diminished, or arrested, would tend to increase the inflammation that was the cause of this diminution, or stoppage; as there would now be an accumulation in the substance of the uterus, not only of all the blood sent there to supply the lochial discharge, but also that which always attends upon inflamed vessels. And, on the other hand, when the cause which arrested or diminished the lochia, (namely, inflam-

mation,) was so far diminished as to leave the extremities of the uterine vessels free, which, by again transmitting their contents to the cavity of the uterus, would not only relieve the engorgement with which they were accidentally affected, but tend also to relieve the vessels of the inflamed portion of this organ; and in this way is the lochial discharge useful.

In pure hysteritis, the mammæ sympathize with the uterus much less than in peritoneal inflammation, or puerperal fever; for we must be permitted to use them synonymously. (See Chapter on Puerperal Fever.) On this account we never have an entire suppression of this secretion, as in puerperal fever, unless the disease runs an unusually long course, or has peritoneal inflammation added, or combined with it. Indeed, in a number of cases we have seen the offices of the breasts remain undisturbed during the whole continuance of the disease.

This circumstance is worthy of notice; since it not only serves as a distinguishing mark between the two species of hysteritis, but also proves to us that the influence of the peritoneum, or some one portion of the genital system, has a stronger influence over the formation of milk than the uterus proper itself. Is this the peritoneal coat of the uterus? or is it only when the ovaria become involved, that this secretion is so decidedly interrupted, or suspended? We believe it to be the latter.

Does not this fact serve to account for certain discrepancies in the accounts we have of the inflammation of the womb, and of puerperal fever? In one instance the disease is called hysteritis, though the secretion of milk was interrupted; and in the other, denying the disease to be "*genuine*" puerperal fever, because this secretion was so little disturbed.

In the first case it was a misnomer to call the disease hysteritis; for so soon as peritoneal inflammation takes place, the disease is, strictly speaking, puerperal fever, though its cause may have been a preceding violent inflammation of the uterus, as we shall see more particularly, presently. In the second case, the disease has been refused the title of puerperal fever, because the mammary secretion was but partially disturbed, though a true peritoneal inflammation existed.

Thus we find that the epidemic fever described by Dr. Leake, as it appeared in the "Westminster lying-in hospital," was remarkable for the following peculiarities: first, the omentum being the most common seat of the inflammation; 2d, the almost total exemption of the uterus, and its appendages, from disease; 3d, the little disturbance of the lactiferous secretion, as will appear from the following statements.

In case V., "the uterus as well as the bladder, was perfectly sound, and without mark of inflammation, or rather morbid affection; (state of milk not mentioned.) In this case "the omen-

tum was melted down." In case VIII., "the omentum was much inflamed; but the greater part of it was destroyed by suppuration." "She had milk in her breasts until a day or two before her death." "The fundus uteri seemed to partake of the general inflammation which had attacked the omentum." "The lochia was not defective, neither was there a want of milk till after the febrile attack." Case XI., "the omentum was suppurated, and converted into thick matter." "The substance of the uterus was sound." "The secretion of milk was moderate on the third day;" on the fifth, "her breasts subsided, and the milk suddenly disappeared." She died on the seventh day. Case XIII., "the omentum was destroyed." "The uterus had a natural appearance, and was perfectly sound." (The state of the milk not mentioned.) Case XVI., "the contents of the pelvis were sound." Milk not mentioned. In none of these cases is there any mention of the inflammation of the ovaria.

The abdomen, we have said, does not swell in hysteritis; unless it be merely in proportion to the increase of size of the uterus itself. This, however, we have seen pretty considerable, owing to confined coagula, but which has always subsided so soon as these were expelled by the contractions of the uterus. Indeed, this circumstance alone produces much pain; and, for a short time, even threatens more serious mischief: especially as this takes place while the uterus is labouring under inflammation, as we have had occasion more than once to see: the sufferings then are very severe and even menacing. Under such circumstances, we have known the uterus to acquire a size nearly equal to that at the seventh month of pregnancy.

In this case the abdomen becomes very tender, and the system is always excited to fever; the pain is constant, and scarcely to be borne; for now the uterus is suddenly put upon the stretch, and this during its inflamed condition. But this state, as far as we have witnessed, does not continue long; for the uterus becomes stimulated to contraction after being thus painfully distended; its mouth opens, and the coagula are either expelled by one or two efforts, or it may require a number for this purpose.

After the removal of these offensive clots, the woman is greatly relieved, and she is rarely exposed to a second attack.

In hysteritis, then, so long as the disease maintains the character of the first species, the abdomen may be considered as but little affected; nor does it suffer at any period of the disease as it does in puerperal fever, either original, or induced; as, for instance, in the second species of hysteritis. On this account, the sufferings are not so severe, and the woman is enabled to change her position, without that intensity of suffering which she experiences from the same effort in peritonitis.

The bowels are variously affected; but in the beginning, as

in peritonitis, they are generally disposed to constipation; or this complaint may be ushered in by diarrhœa; but this is rare, though no unusual attendant in the progress or last stage of the disease, though it may become critical.

The symptoms we have just detailed may be looked upon as constituting the first stage of this disease; or the stage of high inflammatory action, which may terminate either in resolution, or in suppuration.

When this disease is about to yield, there is an alleviation of all the more distressing symptoms; there is a softening or reduction of the uterine tumour, with an abatement of its tenderness; the pulse loses its febrile and inflammatory character; it is less frequent, softer, and more yielding; the skin becomes relaxed, and disposed to become moist. Headache abates, and delirium, if it had been present, subsides; the tongue begins to clean, and the thirst diminishes; the lochia return, and their appearance changes to a more florid colour. The urine becomes more abundant, and less high coloured; the milk is more freely secreted, &c.

But should the disease not have abated, either owing to its intensity, or the feebleness of the means employed, the inflammation may terminate by suppuration in various parts of the proper substance of the uterus, and which is almost sure to be followed by death. Sometimes, however, there is reason to believe that the abscess opens within the cavity of the uterus, and escapes through the os uteri; in which case the woman may recover. We have seen two or three instances, in which we believe this had occurred.

A disposition to suppuration may be suspected, from the pulse becoming more irritated; by its increasing both in frequency and quickness; by the skin being alternately partially dry and moist; chills of more or less intensity, with dark flushings on the cheek, or cheeks: by the tongue becoming dry and red; by the lochia escaping in a larger quantity, but very fetid; in a word, the woman now sinks from irritative fever. Or, the inflammation may communicate itself to the peritoneal coat of the uterus, by passing along the Fallopian tubes, or otherwise; and thus adding puerperal fever to the inflammation of the uterus, making the second species.

Species II.

The mixed Inflammation of the Uterus, or accidental or Secondary Puerperal Fever.

When the peritoneum, covering either the uterus, or its appendages, becomes the seat of inflammation, the disease is called

by Dr. Clarke, a mixed case; and is one of almost certain fatality. For we have an inflammation now besieging two very different tissues or structures, and its effects upon either may be sufficient to destroy life.

This extension of inflammation may be always dreaded, when the first species remains unsubdued; especially after a vigorous treatment has been pursued; for it now betrays a disposition to run on to its second stage. This extension of inflammation to the peritoneum announces itself by the addition of several new symptoms to the unpleasant ones belonging to the second stage of the first species; such as a great increase in the frequency of the pulse; hiccough; tenderness and swelling of the abdomen; vomiting; an inability to lie, other than on the back; a total stoppage of the lochia; a cessation of the mammary secretion; cold sweats; muttering delirium; a dry, husky, blackish tongue; diarrhœa, &c.

When the disease, by its extension, becomes the second species of hysteritis, it may be considered as almost necessarily fatal: at least we recollect no instance of recovery. Nor is this surprising; since a highly dangerous complaint makes its appearance at a time the system is debilitated from the force of a previous disease, and the effect of remedies; and is from these causes unable to support the farther use of means for its relief. The patient, therefore, almost necessarily dies.

Dr. Clarke has furnished us with the appearance of the parts after death, in both species of inflammation of the uterus. He says, "Upon examining the bodies of women who have died under this disease, we have found little or no extravasated or secreted fluids in the cavity of the abdomen, when the disease has existed simply. The peritoneal surfaces have been also discovered free from disease in some cases; in others, however, the peritoneum which covers the uterus has been partially inflamed, and that covering the posterior part of the bladder. Inflammation is often observed running along the Fallopian tubes, which, when cut into, will be seen loaded with blood. The ovaria, too, are often affected in the same way.

"The uterus will commonly be found very firm in its substance, but larger than when naturally contracted. Upon cutting into the substance of the uterus, pus is often found, which, in all the cases I have met with, is situated in the large veins of that part.[1] Pus is also sometimes found in the cavity of the Fallopian tubes, and also in the substance of the ovaria, which are distended by inflammation and matter, so as to equal in bulk, in some cases, a pigeon's egg.

[1] In these cases it is more than probable that the disease was a genuine phlebitis of the uterine veins.

"I have never had occasion to meet with any case in which mortification had taken place in any part of the substance of the uterus, except in one instance, where there was a gangrenous appearance of the cervix; but it is to be remarked, that instruments had been employed in that case, by the gentlemen who attended the labour." Essays, p. 69.

Treatment.

The history of this disease will suggest at once its general treatment.

a. *Of Bleeding.*

The high inflammatory character of this complaint, especially in this country, declares the necessity of the most ample depletion, and the most abstemious diet.

Blood-letting must be employed to the full extent the system will well bear; or it will not and cannot be successful. The extent of bleeding in this disease must be regulated only by its effects; its quantity must ever be of minor consideration, so long as the symptoms continue to demand its repetition. Dr. Clarke says, "In the repetition of the operation, (bleeding,) we must be governed by the same circumstances, and the effect of the former evacuation upon the disease; and it must be observed, that it will frequently be found necessary, not only a second, but a third time," p. 73.

From the histories of the dissections of those who have died of hysteritis, it is evident that nothing but very ample blood-letting and other depletions, can prevent the fatal termination of this disease; or, at least, prevent its ending in suppuration, from which the escape with life must necessarily be rare. And though this disease is declared by Dr. Clarke, to be, "of all the serious complaints which attack the woman in the puerperal state, the least fatal," he is not to be understood to mean, that this is the case when this complaint is badly treated. For immediately after, he says, "Every art which has a tendency in any manner to diminish the quantity of the circulating fluids, and weaken the action of the heart and arteries, should be employed in order to subdue the inflammation at the very outset," p. 72.

This exactly corresponds with our own experience in this disease: we have, in every instance in which we have encountered it, abstracted blood, both from the system at large by bleeding, and also by large leechings upon the abdomen. With regard to blood-letting, our plan has generally been as follows: to bleed from the arm, until it produces sickness of stomach, at least; if

syncope take place, we have no objection. It will almost always be found, after this, that the fever and other signs of inflammation will be much diminished; but this, in many cases, will be of short duration; for the system, if the bleeding has not been sufficient to "strangle" the disease, will react in the course of a few hours, and pain, fever, &c., will again be renewed. Whenever this takes place, be the period longer or shorter, it is to be repeated again and again; nor do we know any reason for stopping, but the reduction of the disease.

But our bleedings are not always renewed from the arm; for, as soon as we get the pulse pretty well down by this means, we have leeches applied over the parts nearest to the fundus of the uterus, and also to the vulva, in such numbers as shall abstract at least eight or ten ounces of blood, and encourage their after-bleeding by the application of moist warmth. Should these abstractions of blood not prove effective, and pain, fever, and other unpleasant symptoms continue; but especially, great pain and tenderness in the parts; if the pulse does not call for general bleeding, we repeat the leeching, nor stop until the end is answered, or until we are convinced our efforts will be unavailing, by the approach of the second stage, or by the addition of peritoneal inflammation.

Perhaps there is scarcely a disease which demands such extensive bleeding as the simple hysteritis; several reasons concur to render this necessary, nay, indispensable.

First, from delivery having lately taken place, the uterus is much engorged with blood, at the period at which it is attacked by inflammation; its vessels, therefore, are still distended, and its whole substance in a highly irritable state; consequently, a new quantity of blood is invited to its parietes.

Secondly, owing to the insulated position and independent economy of this organ, it becomes very readily filled with blood, but parts with it, unless under particular circumstances, as in hemorrhages from this part, with great difficulty, or at least very slowly, as is proved by its bulk several days after delivery; consequently, large quantities may be taken from the general system without greatly influencing the quantity contained in the substance of the uterus.

Thirdly, owing to the lax and distensible condition of the uterine vessels, they are readily restretched by any influx of blood; and consequently, they again become charged by a fresh quantity of it, which now becomes another cause of irritation (by distention,) to the newly provoked inflammation; and thus inviting a greater flux of blood to this part.

Fourthly, that when the uterus becomes thus re-filled, the vessels cannot be relieved from this engorgement, as the only agent by which their capacities can be diminished, and of course, this

state relieved, is now suspended, (namely, the tonic contraction of this organ:) hence the enlargement of this viscus in this disease; and hence it is a favourable symptom, when it diminishes in size, as it shows a return of the tonic contraction, and consequently, an abatement of inflammation.

All these circumstances show the necessity of blood-letting: and at the same time prove, that it will require much to be abstracted, before this particular condition of the uterus can be relieved. It also shows us the importance and propriety of local bleeding, by either leeching or cupping; as the blood abstracted by these means acts with more certainty, as well as more promptly, upon this part.

b. *Of Purging.*

To co-operate with bleeding, purging has been advised; this, to say the least, is a doubtful remedy. Dr. Clarke says, "Neither can I recommend a course of purging, as serviceable in the inflammation of the uterus, which follows delivery. It is always, I believe, right, in the first instance, to procure two or three stools; but afterwards, it will be enough to preserve the regular motions of the bowels, by giving, from time to time, small quantities of castor oil, or a little rhubarb, mixed with other medicines, which may be proper. The objection which I have found to long-continued purging is, it has always the effect of preventing that gentle perspiration, which, if it can be produced and kept up, will do more towards curing the disease than any remedy which I know," p. 75.

The bowels should be kept open by the gentlest means; of these the clyster is the best remedy. This should be done daily at least.

c. *Of Fomentations.*

Dr. Clarke recommends fomentations to the abdomen: we never advise them, for we have never seen them of the slightest use in hysteritis, and we have known them to do mischief. They do mischief by the intensity of their heat; by their weight, by exposing the woman to chills; and, by keeping her constantly wet. They are particularly inadmissible in the early stage of this disease, as they increase the circulation by their warmth.

In such cases of hysteritis as may be accompanied by after-pains arising from coagula within the uterus, which is known, as we have said, by its alternate movements, we have seen an application of dry, or merely moist substances, very useful; by

promoting the contractions of the uterus so as to expel these foreign bodies. The one we have most commonly used is the "tansy pan-cake." This is made by mixing flour and water together to the consistence of a batter, and adding to it a quantity of tansy: and then to be fried like a pan-cake; but made much thicker; (say half an inch,) when done, it is to be placed between two cloths, and is applied to the abdomen. Under these circumstances, for which we recommend this application, it will, we think, be found highly useful: at least it has proved repeatedly so with us. It certainly combines all the good properties of the fomentation, without its disadvantages; but let it be clearly understood, its employment is confined to the cases above stated; namely, where the uterus distended with coagula produces much pain, and the ordinary efforts of this organ are found insufficient to expel them.

The French are fond of fomentations, but we think too much good is ascribed to them.

d. *Of Blisters.*

It is very doubtful whether blistering the abdomen in cases of hysteritis is of benefit: we are at a loss, from what we have seen, how to decide; their efficacy, if they possess any, is unquestionably very limited. Dr. Clarke and others are decidedly against their use, and we are rather disposed to coincide with them; not that we are satisfied they are injurious, but because we are not convinced they are decidedly useful, and because they are very inconvenient, especially to such patients as may have diarrhœa. It is many years since we last used them; and we cannot venture to recommend them. They are too perturbating.

e. *Of Sudorifics.*

Our opinion of this class of remedies may be collected from what we have already said on the subject of "perspiration:" we shall only add, that, in the early stage of the complaint, their powers are altogether inadequate to the state of the disease; and, when it is on the decline, they are generally unnecessary. We have thought them occasionally useful, where the force of the pulse had been abated by the treatment, and nothing but a little feverishness came on in the evening, accompanied by watchfulness and a dry skin. We think we have seen the occasional use of Dover's powder, given at bed-time in ten-grain doses, useful.

But our rule is, never to rely upon them, to the exclusion of evacuants.

f. *Of Opium.*

In the commencement of the disease, the pain which sometimes attends hysteritis has led to the free use of opium; but it is always unfortunate for the patient: for it never subdues the pain, and it is sure to augment the existing evils by its stimulus, and by its constipating effects upon the bowels. It is, therefore, clear, it is not proper in the beginning of the disease; nor is it much more eligible in its decline, as it may interrupt the discharges from the bowels at a time they may be much needed. In combination, as in Dover's powder, it may be now and then useful; but we think no decided advantage is gained by its use, unless it be to relieve some sudden symptom, as severe and unexpected pain in the bowels, from flatulency, or other causes, when the fever is pretty well under command; to moderate unnecessarily severe purging, or hypercatharsis, or to give temporary comfort to an exhausted or irrecoverable patient. Indeed, if depletion has been ample, there is very little use in the opium.[1]

g. *Of Emetics.*

Emetics have been thought highly useful in almost every complaint of the puerperal woman. From their reputed efficacy in peritoneal inflammation, as recommended by Mr. Doulcet, they have been thought useful in inflammation of the uterus, and, accordingly, have been recommended in such cases. Our experience exactly coincides with that of Dr. Clarke on this point, that they "constantly add to the pain, by the agitation they occasion, and the pressure made by the muscles on the inflamed uterus," p. 77.

From all, then, that has been said upon the various remedies proposed for the relief of this disease, it will appear that our dependence is chiefly upon bleeding and purging. The treatment for the second species, or the mixed inflammation of the uterus, will be learnt under the head of Puerperal Fever.

[1] Dr. Clarke is much in favour of opium in this disease; this, perhaps, arises from his not carrying bleeding and purging as far as we are in the habit of doing; the consequence is, that pain is much more permanent, in cases which have not been freely held, and may require, for temporary purposes, the aid of laudanum. Its indiscriminate use, however, cannot be too severely condemned, in diseases of high action.

CHAPTER XVIII.

OF PUERPERAL FEVER.

This term, by some, is now looked upon as generic; and should, therefore, be employed with more severe restrictions than it formerly was. Dr. Conquest says, that "in reality it designates only a prominent symptom of disease, but which, in ordinary usage, embraces complaints having little or no resemblance or connexion, either in their essential nature, their seat, or their treatment. For I fearlessly appeal to every cautious, intelligent, and reflecting man, whether the term is not in daily use equally to designate spasmodic and inflammatory affections of the peritoneal investments of the uterus, and abdominal viscera; inflammation of the muscular fibres; inflammation of the veins of the uterus; phrenitis; irritative fever; diarrhœa; and spasms of the intestinal canal, so frequently confounded with inflammation."[1]—Observations on Puerperal Fever.

If this statement be true, and we have no doubt but it is, from the respectability of the authority, the term puerperal fever is used in Great Britain much more vaguely than in this country. And though our notions respecting this disease are not logically accurate, they are, nevertheless, more definite than they appear to be in England, agreeably to Dr. Conquest. For we do not believe that any well-instructed practitioner here would agree to call all the affections enumerated above, by the sweeping term, "Puerperal Fever." We have observed already, in treating of the inflamed womb, that much confusion existed; as both hysteritis and peritonitis were expressed by the same term; though very different tissues were implicated in the two diseases: yet with this admission, we are by no means prepared to say at this moment, that much practical mischief has arisen from this wrong location of the inflammation, as both, cæteris paribus, require very much the same treatment, though we profess to be warm sticklers for correct pathology. We will, therefore, at once, declare, that by puerperal fever we understand, inflammation of

[1] For these reasons M. Tonnellé prefers the term puerperal fever to more specific names, as we shall have occasion to say presently. Strictly speaking, puerperal fever means a fever that may attack a woman in child-bed—and, as the term has no pathological meaning, it is preferred by the writer, as it will embrace all the febrile affections to which the woman may be liable after delivery, however varied their seat or nature.

some one portion or other of the peritoneum, which attacks women almost immediately, or within a few days after their delivery; and is distinguished from every other affection of the febrile kind, by being always attended by a more highly accelerated pulse; by a painful soreness of the abdomen; and with more or less distention, (after a short time,) of this cavity. This disease is frequently, but not always, ushered in by a chill.

For however much authors may disagree about the essential nature of this disease, its remote and proximate causes, or its mode of treatment, they, nevertheless, one and all consent to consider the marks just stated to be its pathognomonic symptoms. And, perhaps, in no disease of the febrile kind, can so many peculiarities be enumerated, as almost constantly present themselves in this; such as the highly accelerated pulse; the failure in the secretion of the milk, if it has not taken place previously to the attack of the disease; its almost immediate arrest, if it has begun to be formed; the diminution or suppression of the lochia; the constipated condition of the bowels; the peculiar character of the alvine discharges; the exemption, for the most part, from delirium; the loss of maternal feeling, &c.

The fatal character of this fever is almost proverbial: Dr. Denman declares "it occasions the death of much the greater part of those who die in child-bed;" and many others bear a like testimony of its dangerous tendency. Dr. Clarke declares, that three out of four die. "Perhaps there is scarcely a disease with which we are acquainted, whose consequences are more fatal than this; as far as I have observed, three-fourths of those who have been seized have fallen sacrifices to its severity." Essays, p. 132.

The accuracy of this statement may, at the present time, be very well questioned, if accuracy in pathology be strictly adhered to—for it is but just to suppose, that in the time of Dr. Denman and Dr. Clarke, and as it has almost ever been since, agreeably to Dr. Conquest, many other complaints, nay, almost all of the febrile kind that befell the lying-in-woman, were called puerperal fever. This indiscriminate use of the term is found much fault with, as we have just shown, by Dr. Conquest, while M. Tonnellé prefers the term to peritonitis, or metro-peritonitis, as being more comprehensive; and as it expresses nothing of itself—that is, that it has no pathological reference; for he has satisfactorily shown that neither peritonitis, nor metro-peritonitis, will express the pathological condition of all that have fever, or die in child-bed; or by puerperal fever, if we employ the term specifically.

Thus, M. Tonnellé found, that in 222 cases of puerperal or child-bed fever, the peritoneum was found affected in 193; the uterus and its appendages in 197. In 165 cases, the changes in the peritoneum and uterus were differently combined; those of

the peritoneum simply were 28, those of the uterus were 29. In 79 cases, the alterations of the uterus were produced by simple metritis; superficial *ramollissement*, 29; profound ramollissement, 20; inflammation of the ovaries, 58; with ulcers, 14;—total 190.

Alterations in the uterine veins and lymphatics—pus was found in 90 instances in the veins: in 32 it was found in the lymphatics; and in 3, it was observed in the thoracic duct; with inflammation and suppuration of the inguinal and lumbar glands, in 9 instances, making 134;—total changes effected in the uterus, 324.

Suppuration of the veins of the uterus, 32; with *ramollissement* or putrescency, 11; with metritis and *ramollissement*, 5; with peritonitis without any other alteration, 34; entirely insulated, 8;—total 90.

Suppuration of the lymphatics with the veins, 20; with those of the uterus, 13; with *ramollissement* of the uterus with suppuration, 6; with simple peritonitis, 3; without any other alteration, 2;—in all 44.

Inflammation of the ovaries with simple peritonitis, 29; with alterations of the uterus, 27; with simple metritis, 8; without any other alterations, 2; in all 62.[1]

It appears from these tables that the alterations of the uterus exceed by a little those of the peritoneum, if taken collectively; but if taken alone, they very much exceed them. And that in 134 cases there was pus in the veins and lymphatics.

It is difficult to assign the cause of the results observed by M. Tonnellé; for they differ, (if other observers are correct,) from what would seem to be the experience of others upon this point. As regards our own experience in autoptic examination, we are willing to take it at its absolute value, for our opportunities have been nothing, when compared with those of M. Tonnellé; yet the little we have seen leads to a belief that there must have existed some predominating cause for the very frequent lesions of the uterus itself; as we very rarely have witnessed any alterations in that organ, in the few bodies we have examined. Besides, neither Leake, Hulme, Clarke, Hey, nor Armstrong, have made the same observations. Nor do we think, that the result of hospital experience is always the best authority for the *character* of any disease, as this is known to be modified by local causes, however inscrutable these causes may be. We are therefore much inclined to the belief, that peritoneal inflammation is very much more common in this country, than metritis, properly so called; for, if the abdominal, or that portion of the uterus that is covered by peritoneum, be inflamed, and no other tissue of this organ, it

[1] It is proper to remark, lest this table should appear to contradict itself, that the reason the whole amount of the two classes of affections exceeds in number all the cases dissected, is, that in many cases peritonitis was complicated with metritis.

is, to all intents and purposes, peritonitis, and not metritis. But be this as it may, the observations of M. Tonnellé are no less interesting than curious; and he has proved, that of the very many deaths of women in child-bed, a large proportion of them was not owing to acute peritonitis, as metritis and phlebitis of the uterus come in for a large share; at least this was found to be the case in hospital practice.

a. *History of Puerperal Fever.*

In Europe,[1] it frequently becomes epidemic; and when this happens, its ravages are sometimes truly awful, as its malignity is thought to be increased by the peculiar constitution of the air, which renders it epidemical. In this, almost all the writers upon this subject agree. Dr. Leake says, "It will always be found most fatal when most epidemical, that is, during the distemperature of the air; and least of all so, when it happens in healthy seasons, from accidental causes."—Obser. on Child-bed Fevers, p. 101. Mr. Hey and others declare the same thing.

In this country, this disease very rarely presents itself as an epidemic; the only record of this kind that offers itself to my recollection at this moment, is that of Dr. Jackson. He says, it prevailed "both in Northumberland and Sunbury, in this state, (Pennsylvania,) in the fall of 1817, and in the spring of 1818. And though treated evidently with both vigour and ability, about one half died."—Eclectic Repertory, vol. viii. p. 202.

So far as we know, this disease has never appeared as an epidemic in this city; though sporadic cases have been more frequent at one time than at another. It has always, however, been a disease of great danger, and is sure to excite great alarm whenever it may occur. It does not appear to attack the poor, more frequently than the females in the higher ranks of life; for when it occurs, one class seems as liable to it as another; if we can call any thing happening so rarely as this disease does with us, a liability.

Yet, notwithstanding the infrequency of this disease in this place, it does not seem to invalidate the observation of Dr. Denman, that "it destroys the greater part of the women who die

[1] In the year 1746, this disease raged in Paris to a terrible extent, especially in the Hotel Dieu. It attacked only the poor women; yet it was neither so violent nor so common when they were delivered at their own houses, as when placed in the hospital. In this place it was remarked, that of twenty women who were attacked, scarcely one escaped.

The character of the disease, according to the writers of that day, resembled in every particular the puerperal fever of Great Britain, and of this country.—Quoted by Clarke, in Essays, p. 104.

in child-bed:" for when deaths occur in the puerperal state, this disease has its full share of them. But deaths in child-bed are comparatively of rare occurrence in this country, when contrasted with their frequency in Europe. This is partly owing to our not having a class of people that exactly corresponds with the class called "the poor" in Europe; and among whom this disease commits dreadful ravages, and especially at the time it becomes epidemic.

In Great Britain, it occurs perhaps more frequently as an epidemic than on the Continent; the cause of this we cannot pretend to explain; but such appears to be the fact. Mr. Hey and others describe this disease as an epidemic of frequent occurrence, and one that visits one district after another, without any apparent cause. Thus, he tells us, that "for some years past, the puerperal fever has prevailed epidemically in different parts of Yorkshire." Again, that "it appeared first at Barnsley, twenty miles south of Leeds, where it was prevalent and fatal. It began there early in the year 1808, nearly two years before it became general in Leeds," p. 15.

Again, "About two years before the fever which I am about to describe, made its appearance, a puerperal fever was epidemic in this town, (Leeds,) which was similar in its nature to that now under consideration; but it was more partial in its extent, afflicting only one district of the town, and being confined chiefly to the poor," p. 15. He further states that "there was a perpetuation of this disease from November, 1809, to about Christmas, 1812," p. 16.

These facts incontestably prove the frequency and the extent of the disease, (in *England*, at least,) when compared with this country; and the account given by Mr. Hey is but one of many of the histories of this epidemic, which has occurred in Great Britain. See Dr. Gordon,[1] Dr. Joseph Clarke,[2] Dr. John Clarke, &c.[3]

We are, however, not to be understood to mean, that fevers do not occur in child-bed in this country; we only declare, that this particular fever is one that we very rarely see. The milk fever, the ephemeral fever, called the "weed," are frequently met with; for here, as well as elsewhere, improprieties during

[1] See Dr. Gordon's account of the puerperal fever, when it appeared as an epidemic in Aberdeen, in Scotland.

[2] See Dr. Joseph Clarke's account as it appeared in Dublin in 1760. Duncan's Medical Comment, for 1790. It again appeared in Dublin in 1767.

[3] See Dr. John Clarke's account of the low fever of child-bed, in 1787 and 1788. Mr. White's account of it at Manchester, in 1761. Treatise on management of lying-in women, p. 165. Dr. Leake's account for 1770, as it appeared in the Westminster Hospital. Prac. Obs. p. 241. Mr. White's account as it appeared in Edinburgh in 1773. Tenon's account as it appeared in Paris from 1774 to 1781.

the first few days of confinement will be committed, and the patient be subjected, in consequence, to the fevers just mentioned.[1] Besides, we have every now and then inflammation of the womb, which sometimes passes for puerperal fever.

In the account we shall give of this disease, we shall confine ourselves to that inflammation of the peritoneum that succeeds delivery. For we are of opinion, that this will embrace "the low malignant fever of lying-in women," as detailed by Dr. Clarke, as well as the disease described by Hulme, Kirkland, Leake, Denman, Gordon, Armstrong, Hey, &c. It is true, that several of these include in their accounts what they term an inflammation of the uterus, as Hey and Denman; yet the simple inflammation of the uterus is a very different disease from puerperal fever: so much so, in our opinion, that they should never be confounded; and, for this reason, we have given them a separate consideration.

b. *Of the Predisposing Causes.*

Much diversity of opinion exists as to the remote or predisposing causes of puerperal fever; especially when it may appear as an epidemic. Cold, moisture, labour itself, &c., have been assigned: but it seems nothing satisfactory has yet been ascertained upon these points. For M. Tonnelle[2] has pretty satisfactorily ascertained that neither cold nor moisture can be looked upon as causes. For when this disease raged in "la Maternité," the hospital to which he was attached, as the pupil of the late M. Desormeaux, neither of these powers could have operated as regards cold, for it was observed, that though the disease was very common in January, which was very cold and dry, yet in December it was very rare, though this month was similar as regards temperature and dryness; and the agency of moisture appeared to be equally uncertain; for, in the summer, which was both cold and wet, cases were numerous, yet they were rare at other times, when the weather was similar; while on the other hand, they were very common during the spring, when the draught was very unusual in length and duration. In a word, the disease prevailed in its greatest extent during cold, dry weather; in temperate weather, as well as during moist, temperate weather—while at other periods of the year, when similar weather prevailed, the disease was neither more frequent nor

[1] We consider the milk fever certainly, and the "weed" most probably, of artificial origin: for we believe we are correct in saying, where the nursing has been properly conducted, they never appear; or if they do, it is very rarely.

[2] Des Fièvres Puerpérales Observées à la Maternité de Paris.

more severe. Neither could the frequency or severity of the disease be traced to a vitiation of the atmosphere of the hospital. Indeed, the disease prevailed in the most whimsical manner,—now existing extensively and severely, and then disappearing, and as suddenly reappearing. M. T. is decidedly opposed to the doctrine of its being contagious.

And, with respect to the influence or agency of labour itself, in producing this disease, it would appear from the testimony of all the writers on puerperal fever, and in this M. Tonnellé agrees, that a difficult delivery has no greater agency in the production of this fever, than the most easy or the most natural. All that appears to be necessary to its appearance is the emptying of the uterus; and even this is not always essential to its production, as instances have been recorded, where this fever manifested itself before delivery.[1] Besides, the male is unquestionably liable to peritoneal inflammation as well as the female; and when it occurs in them, the same general phenomena present themselves. Thus, Dr. Armstrong, p. 2, assures us, "it does not seem to depend upon the difficulty of labour, for in most of the women in whom it occurred, parturition was remarkably easy, and the placenta was cast off after a proper interval, and without more than usual pain. Nor was the lochial discharge, before the attack, in any way apparently affected."

Mr. Hey says, p. 21, "It is somewhat remarkable, that I have scarcely known an instance in my own practice, of this disease coming on after a preternatural labour. I do not mean to imply that such cases were more exempt from it than others, but so it happened; and the fact shows that it was independent of any thing untoward in the labour. It has, on the contrary, most frequently occurred, within the compass of my experience, after the most easy and natural labours."

But Dr. Clarke seems inclined to a contrary opinion, though not exactly satisfied with his own sentiments. He observes, "For some reason or other, there seems to be a great aptitude in the peritoneum to be inflamed in women after delivery, so that causes applied to the body, which generally have a tendency to excite inflammation of internal parts, seem to be peculiarly di-

[1] A case of this kind occurred lately. A lady was delivered at 6 o'clock, P. M., of a six months' child; she became extremely ill by the next morning, all the sad signs of puerperal fever declaring themselves: she died at 3 o'clock, P. M., of the same day—that is, twenty-three hours after delivery. It was the opinion of Dr. James, who saw the patient in consultation with Dr. Moore, that the fever had commenced before he saw her—the pulse, at his first visit, being extremely frequent. Her labour was sufficiently easy for a premature delivery; but the patient sank rapidly until the moment of death. When I saw her, (9 o'clock, A. M., fifteen hours after the birth of the child,) she was nearly without pulse, though she retained her senses; the abdomen was much swollen, and extremely distended—she died six hours after. I am of opinion that this was an instance of inflammation of the peritoneum preceding delivery.

rected in their operation, to this part, during the time of childbed. Hence this disease, (the inflammation of the peritoneum,) is very frequent, and has been also called puerperal fever."

"It has been conceived, that this predisposition might depend upon some change in the state of these parts, or of the cavity of the abdomen, succeeding to the act of labour, or the contraction of the uterus. Yet it seems not to be conformable to the wisdom of nature, to construct parts so that the circumstances to which they must necessarily be exposed in a state of health, should either prove a predisponent, or an immediate cause of disease. Moreover, the alteration of the state of the cavity of the abdomen is so frequent an occurrence, and this complaint is comparatively so uncommon, that it is hardly credible that so many should escape, and so few be liable to its influence.

"In some cases, the pressure made by the child's head, in entering the pelvis, against the peritoneum, either covering the cervix uteri,[1] or the bladder, may predispose to, if it does not actually produce the disease; and I believe it is often an occasional cause. It may be said, that this also would more frequently produce the disease, than we find in fact that it does. But, on the other hand, it should be remembered, that it is only in cases where the head is comparatively large, that so great a degree of pressure can happen, as to occasion the disease. Where the head is small, in proportion to the upper aperture of the pelvis, or is of the usual size, any violent degree of pressure can hardly take place, which is the reason why the disease does not occur after every labour." Essays, p. 81.

Now, the hypothesis of Dr. Clarke is contradicted by almost every other writer; for they declare, that the severity of the act of parturition has no agency in producing the disease; and Dr. Denman informs us, that "Women are certainly not attacked so often with this fever after difficult labours." Again, were this a cause, it should be an ever-acting one; yet, in this country, the disease is scarcely known, though the females of it have their share of children, whose heads are of full size, and which exert as strong a pressure upon the upper aperture of the pelvis, and consequently compress the peritoneum as certainly and as powerfully, as in England, or other portions of Europe.

We might readily multiply authorities to prove this curious fact; and from its importance it should challenge the attention of the physician to an investigation of the cause of it; for we are not altogether satisfied with the explanation that Dr. Denman gives of this singular exemption; namely, "Because of the particular care with which they are then managed." Were this the

[1] Dr. Clarke has committed a little mistake in his anatomy; the cervix uteri is not covered by the peritoneum; it is only the body and fundus that derive a coat from this membrane.

cause alone, it would be easy to arrest the progress, or at least to mitigate the violence of this malady, by bestowing the same attentions; especially upon those who have easy labours, while the disease was ravaging as an epidemic. Indeed, it would seem that the public had some right to expect a practical illustration of the suggestion from the author of it; and we truly regret that he had not turned his attention to it.

c. *Of Prophylactics.*

It is true, there appears, from the practice of some, a foundation for the opinion just named above; so far, at least, as certain medical treatment comprises that peculiar care bestowed upon women who have had laborious labours, alluded to by Dr. Denman; for Dr. Gordon informs us that when the puerperal fever raged as an epidemic at Aberdeen, a bolus composed of calomel and jalap, given in the morning, the day after delivery, either prevented the disease entirely, or answered the good purpose of anticipating the cure before the attack.—Treatise on Puerperal Fever, p. 100.

This must certainly have been a most consoling fact to the physician, and a most important discovery to the afflicted, or those liable to be afflicted; since a sure prophylactic was at hand, or a remedy in waiting, which was capable of disarming this terrible malady of its dangers. The only matter of surprise is, that after this discovery we should have heard any more of the dangers, or even of the occurrence of puerperal fever; for if the value of the remedy had been really as great, as the eulogium passed upon it declared it to be, we ought not.

Mr. Hey has furnished us with his experience of the use of this remedy: he says, "In *every case of accouchement*, it was my practice to give a purgative on the day succeeding the delivery; which, if it *did not prevent the disease*, afforded *some advantage* in its cure," p. 154. Now, as Mr. Hey has not given us the proportions of success of this plan, we can only conjecture, that neither its prophylactic, nor its sanative powers, could have been very great; since he constantly was acquiring patients, some of which he lost.[1] Nor does it appear, from the history of his cases, that those who got well were indebted to the anticipating purgative alone, as blood-letting and farther purging were constantly had recourse to.

From all we can learn from the testimony of Dr. Gordon him-

[1] Indeed, Mr. Hey informs us, immediately after, p. 155, that "some of the worst cases in his practice occurred after an excessive operation of the purgative."

self, and from Mr. Hey, who followed his practice, it does not appear that the plan under consideration deserves the sweeping encomium bestowed upon it by its inventor; that it was highly proper and very useful, we have every disposition to believe; but that it ever *prevented the disease*, we very much doubt.[1] Indeed it would be extremely difficult to ascertain when it did prevent the onset of this disease; for the fact amounts but to this negative; that some of the women who took it escaped the disease; but this is no proof that the calomel and jalap prevented it; for it is not fair to presume that every newly delivered woman would have had puerperal fever.

Besides, were this power of preventing the onset, or of abating the force, granted to the calomel and jalap, it still leaves the fact unexplained, of women, who must have had laborious labours, being less liable to this disease; since, agreeably to the practice of both Dr. Gordon and Mr. Hey, every newly delivered woman was treated alike, as regards the exhibition of the purgative: yet, those who had easy labours were more certainly liable to puerperal fever than those who had difficult times.

From all this, it would appear that the subject is still open for inquiry; and we would earnestly recommend it to those whose practice will furnish them with opportunities to inquire into the fact, and endeavour to discover the cause why a tedious and protracted labour should be any way instrumental in diminishing the liability to puerperal fever. For we may well ask how it is, that long suffering, and very certainly, lesion of some kind, and to various extents, should diminish the predisposition of this disease, or abate the force of the exciting causes!

Will a slight inflammation of the proper substance of the uterus, and of the vagina, which follow almost necessarily as a consequence of a long-protracted or preternatural labour, interrupt the tendency to peritoneal inflammation? Is this rendered probable by other facts relative to this disease which are certainly no *less* singular, namely, that "not one instance has been observed, of any woman, who had an abscess in the breast, being attacked with this fever; nor of any who, in consequence of their labour, had such an affection of the bladder as to occasion a suppression of urine?"[2] Denman, Introd. Francis's Ed. p. 574.

[1] Mr. Hunter long since taught us that we may cure a disease, but that we cannot destroy a predisposition. Even the anticipating purging cannot always be proper, if carried to any considerable extent. We see this illustrated in the practice of Mr. Hey, just alluded to; for the powerful operation of a cathartic may be, and doubtless is, sometimes, the exciting cause of the disease.

[2] We do not mean that these facts should be taken for more than they are worth; for we are aware that different explanations may be given of them; for, of the first it may be said, that the woman who lives free from the disease long enough to have milk secreted, and an abscess to form, most probably had no predisposition to the disease, and would have escaped the fever, without the abscess;

But notwithstanding the powers of a mercurial purgative have been in our opinion rather overrated, it is every way certain that it has been highly useful; we should, therefore, from both facts and analogy, recommend the adoption of the plan first suggested by Dr. Gordon, of purging briskly at the end of the first eighteen or twenty hours, or earlier, after delivery, whenever there was a tendency in puerperal fever to become epidemic, or where sporadic cases were more than ordinarily frequent.

d. *Of the Seat of the Disease, and its proximate Cause.*

Post mortem examinations have satisfactorily shown puerperal fever to consist in peritoneal inflammation. This inflammation does not confine itself to any one portion of this membrane. The mesentery, omentum, the liver, the mesocolon; in a word, every portion of the abdominal contents may be the seat of this inflammation; nay, even the pleura and lungs have been found inflamed; and we have shown by the tables of M. Tonnellé that the whole of the uterine system may be involved, even to the very vessels of these parts themselves, as the veins, lymphatics, &c.

Before death, it is not uncommon for this inflammation to terminate in effusion; hence the immense quantity which is sometimes found within the abdomen; and perhaps an evidence of some peculiarity of the lining of this cavity, since no other serous membrane pours out an equal quantity in the same time; nor does equal danger attend the inflammation of them.

Mr. Cruikshank informs us that he has "taken away often forty or sixty pints of water, which had accumulated in the cavity of the abdomen, in the few days the peritoneal inflammation had lasted, during the usual species of child-bed fever." On the absorbents, p. 116.

Dr. Clarke says, "The first thing which, in the greater number of instances, (of dissection,) presents itself, is a collection of fluid in the general cavity of the abdomen, sometimes very large in quantity, inasmuch as I have often absorbed, by means of a sponge, several pints of it." Essays, p. 135.

When effusion is extensive, the existence of a previous inflammation is less evident: this has led some to conclude, that this effusion was not the effect of active inflammation; but rather the result of a certain disposition of the vessels of the parts affected, essentially different from an inflammatory action.

and, that the abscess was only an evidence of this want of disposition, and not of its being prophylactic. Of the other, it may be said that the freedom from this fever should be referred to the tedious and painful labour of which the suppression of urine was a consequence; and, therefore, that this symptom should not be considered as having any agency in procuring the exemption.

It is easy to refine too much, and nowise difficult for a sturdy polemic to deny the force of the most obvious facts. What but the resolution of inflammation yields such a quantity of fluid as is found after puerperal fever? what but inflammation giving out coagulable lymph will account for the interstices of the intestines being filled up; their surfaces covered; and their various convolutions connected in masses? what but an inflammation, and that of the most active kind, will give rise to such an acceleration of pulse; such immoderate heat; such intense pain; such exquisite soreness, as almost constantly combine in the puerperal fever? In a word, we must repeat, what other condition of the blood vessels, than inflammation, induces them to give out so suddenly and so excessively their fluids? Besides, inflammation of the peritoneum from other causes, is known to terminate in large effusions within the abdominal cavity: the rupture of the uterus, if the woman should not die too soon, is always, we believe, accompanied by a large effusion.

Now, it is a fact, very well ascertained, indeed we had almost said, not disputed, that when the vessels of an inflamed surface proceed to effusion, there is an immediate reduction of that inflammation; nay, sometimes, a complete removal of it; so much so is this occasionally the case, that disappointment has followed the search for it, where there previously existed every evidence but ocular demonstration.

Had Dr. Clarke been sufficiently acquainted with this fact, or permitted it to have had its full weight, we would scarcely have consented to have agitated the following questions:

I. "Does the fever in a puerperal woman dispose the peritoneum to effuse the fluid, which, being of a coagulable nature, forms a coat on different surfaces?

II. "Does an inflammation of a small part dispose the whole of the peritoneum to throw out the coagulating fluid?

III. "Does the inflammation precede or follow the effusion? If the latter, is the inflammation excited by a stimulating quality of the matter itself? or lastly, are the fever, the inflammation, and the effusion of fluid, entirely independent of each other, as to cause and effect, and are they only parts of one whole, which is a disease sui generis?" p. 157.

If the first question mean, as we presume it does, that the fever in question may so act upon the peritoneum as to force it to effusion without any intermediate condition, as inflammation, we would answer it in the negative, and for the following reasons:—

1st. Because we know of no instance of an effused fluid resembling the one found in the cavity of the abdomen, without the intervention of some altered condition of the parts concerned; nor of any other fluid, to the same extent in the same space of

time. In cases of large collections of water in cavities, as in ascites, &c., it is always very gradual; and seems to be rather owing to the defect of absorption, than to an increase of deposition; though in some instances there is strong reason to believe it to be the result of a previous inflammatory action.

2dly. Because, we know, when serous effusions take place in other portions of the body, that they are always preceded by inflammation; as in hydrothorax, hydrocele, hydrocephalus, &c.; and when they take place upon the surface of the body, as from blisters, burns, or scalds, we know that inflammation existed before the effusion; nor do we ever see it but as the result of highly excited vessels.

3dly. Because, in all instances of the resolution of inflammation, by effusion, a serous fluid is thrown out; and when thrown out, the inflamed surface which yielded it is always relieved from the excitement, either in part, or altogether.

II. The second question we would answer also in the negative; and for reasons that might be in part collected from the answers to the first; for, 1st, if the inflammation of a portion of the peritoneum could excite portions to effusion which are not inflamed, it would of course be admitting, that effusion can take place without inflammation, or that a sound part can perform the functions of a diseased one; a position we must entirely deny. 2dly. Were this admitted, it would be supposing that an inflamed surface, and one which is not inflamed, would yield the same fluid, which is contrary to all experience.

III. To the third query and consequences, we would say, that inflammation always precedes effusion; and that the fever is but the result of the local inflammation.

1. Because a sense of soreness and tenderness is always experienced in some one portion of the abdominal cavity, before the fever is well formed; and in the accounts we have of this fever, as it appeared in the Hotel Dieu, we are told that "after the escape of the waters, the uterus became dry, rigid, painful, and swelled, and that the lochia did not flow as usual."

2. Because the excitement of the arterial system keeps pace with the inflammation of the peritoneum.

3. Because fevers from other causes have no tendency to produce peritoneal inflammation; as milk fever, the weed, or even erysipelas; consequently, that there must be a disposition in the peritoneum to take on inflammation after delivery.[1]

[1] We may include, with much propriety, under the head of *delivery*, those instances of abortion, which have been followed by puerperal fever. Dr. Hull says, "It sometimes attacks women who have suffered an abortion, or who have been prematurely delivered, as well as those who have gone their full time of utero-gestation." Treatise on Phlegm. Dolens, p. 228.

Mr. Hey also informs us, that he met with two cases of puerperal fever after abortion, p. 27. See note to page 349.

4. Because, whatever excites inflammation in the peritoneum, by local irritation, as tapping, sometimes; rupture of the uterus; inflammation of the proper substance of the uterus, when it involves this membrane, &c., but not until then; extraneous substances passing from the stomach and bowels into the cavity of the abdomen; punctures or wounds in this cavity, give the same phenomena; proving beyond doubt that when this membrane is indisputably the seat of inflammation, the system at large sympathizes in the same manner as in puerperal fever.

From these facts, and others developed by dissection, we have no hesitation to declare, that puerperal fever is an inflammation of the peritoneum.

This inflammation always terminates in effusion or suppuration before death; and never, or but very rarely, in gangrene, so far as dissections have yet discovered.[1] Dr. Clarke says, p. 135, that "the inside of the uterus, or of the intestines, has not been found inflamed in any of those whom I have had an opportunity of examining after death; much less have I found any signs of *gangrene or mortification.*" These are curious facts as regards this disease; and they are particularly valuable as coming from so veracious and candid a man as Dr. Clarke; and completely establishes Bichat's doctrine of the tissues; the disease which killed the patients he examined was "the low fever of child-bed," and had, agreeably to him, a strong tendency to "putridity," as his practice declares, and as on one occasion he avows, p. 115.

For he expressly says, that "all the medicines which have been employed with a view to the diminution of an inflammation, have, in the course of my experience, failed in curing the disease. It became, therefore, next an object, to try whether such as have a tendency to support the strength and diminish the irritability, would be attended by better success.

[1] Dr. Fordyce intimates, from the character of the symptoms, and the analogy of the circumstances, that we might *suspect gangrene sometimes;* but there is no mention that this has ever taken place. He says, that "the suppuration is very different in its effects from the suppuration which takes place in other inflammations: for the pain goes off suddenly, and even the soreness sometimes, but the tumefaction continues; the pulse becomes more frequent; the strength is more depressed, and the patient is cut off in from six to twenty-four hours afterwards; so that *from the symptoms* it might *be supposed,* that gangrene had taken place in these cases." Hull, p. 234.

And Dr. Leake says, in Case VIII. p. 197, "On opening the body, the inferior lateral portion of the omentum was found much inflamed; but the greater portion was destroyed by suppuration. Case IX. The greater part of the omentum was suppurated; the remaining portion much inflamed, &c. Case XIII. Great part of the omentum was destroyed, and converted into matter; what remained had become *gangrenous:*" this is the only mention made of gangrene by Dr. Leake, and the part being in this condition, must have been the result of previous inflammation, but which had not relieved itself by effusion, and thus died. For he makes no mention of a fluid in the abdomen, but declares that that portion of the omentum which is inserted round the great curvature of the stomach was considerably inflamed.

"As soon, then, as any very considerably increased frequency of the pulse is discovered, I believe that it is right to begin immediately with exhibiting the Peruvian bark very freely, and in as large quantities as the stomach will bear," &c., p. 162. Now, the mode of treatment here pointed out declares the tendency to the typhoid, (or putrid) state, if you please; yet there was neither mortification nor gangrene discoverable in any portion of the cavity of the abdomen. Yet the phlegmonous, the erythematous, and erysipelatous inflammations, when violent, will each terminate sometimes in gangrene or sphacelus.

Dr. Clarke has endeavoured to prove that the inflammation of the peritoneum of a puerperal woman, and "the low fever of child-bed," are essentially different diseases. But he has not been successful in this attempt, as may readily be proved by comparing the symptoms he details as belonging to each, as well as the post mortem appearances, making allowances for seasons, locations, epidemic constitution of the air, and, consequently, the *type* which these will impose upon certain parts of the character of the disease.[1]

In both of the diseases which he describes, (Essays, sect. III. p. 81, and Sect. VI. p. 102,) the peritonitic inflammation, and the puerperal fever, attack at the same period after delivery: they are both preceded, sometimes by rigour, and sometimes not. Both have a soreness, tenderness, and distention of the abdomen; in both the pulse is accelerated in a remarkable degree, very soon after the tenderness of the abdomen is experienced. In both, the secretion of the milk is interrupted, if it has not been secreted; or if begun to be formed, it is immediately suspended. In both does the woman discover indifference to her offspring; in both is the state of the stomach, the appearance of the tongue, the condition of the brain, the feel of the skin, &c., the same; or,

[1] Dr. Clarke says, "It is very well known, that during the strong exertions of labour, every woman suffers a kind of temporary fever; or, in other words, the action of the heart and arteries is very considerably accelerated. Now, if this should happen to a woman under the influence of the causes adverted to above, (namely, the epidemic constitution of the air, &c.,) and if, under these circumstances, any occasional cause of fever should occur, such as exposure to cold, or infection, the disease thence arising will be *most susceptible of that type* to which the system has the greatest aptitude," p. 152. And to show his entire belief in the power of the air, he says, the epidemic disposition of the season must likewise always be taken into the account; otherwise, under these circumstances (of predisposition,) "the same disease would always arise, if the same occasional causes were applied, which is not the case," p. 151. He farther adds, p. 151, "Now the nature of the epidemic constitution, which had prevailed at the time when this disease was prevalent at Paris in 1746, and in London in 1787 and 1788, was a disposition to disease of debility; with such a predisposition, if any diseased state, especially fever, should appear in a parturient woman, it would almost certainly put on that character which the preceding history of this disease fully justifies." Now it is evident, that in such cases the nature of the disease is not changed, it is only the *character of the type* that is affected.

at least, they are without a marked difference in any respect. In both does the pulse increase in rapidity, as the soreness and distention of the abdomen increase; and both have the same attending symptoms, and the same period for their fatal terminations. Both have the same kind of effusions.

The differences observed in post mortem examinations are, indeed, very trifling; in the inflammation of the peritoneum, "the appearances, upon examining the bodies of women who have died of the disease, have been those of inflammation of this membrane, covering the different viscera. Upon the whole, that of the neck of the uterus and bladder will be found more generally inflamed than of other parts; nevertheless, there is no part on which inflammation is not sometimes found. The surface of the stomach, liver, spleen, omentum, great and small intestines, uterus, the internal peritoneal lining of the muscles of the abdomen will, in their turns, or altogether, be found to partake of the disease: and, as far as my experience leads me to judge, no part more than another."[1]

"A very large quantity of fluid is generally collected in the cavity of the abdomen, resembling serum mixed with pus; but it differs from both of them in this respect, that it is not homogeneous in its texture, but intermixed with portions of a solid matter, resembling pieces of the same solid matter as is found on the surfaces of the peritoneum, the nature of which will be more particularly taken notice of hereafter," p. 88.

Of the examinations he made of those who died of "the low fever of child-bed," he says, "The first thing which presents itself is a collection of *fluid in the general cavity of the abdomen*, sometimes very large in quantity; insomuch, that I have often absorbed with a sponge several quarts of it. It is of the *same nature with that which I have described in a former section*, (namely, the above,) as far as can be ascertained by its sensible qualities. There is something very remarkable in the smell of this fluid, which is peculiar to itself, and distinguishes it from any other fluid which I have ever met with in the human body, either in health or in disease.[2] Where it is in large quantity, all the sur-

[1] Walter is said to have dissected more than five hundred (*a*) women who had died in child-bed. He constantly found, in those who died of puerperal fever, the peritoneum, throughout its extent, smeared with a pus-like substance; but never found the mucous or muscular structure implicated.—Med. Chirur. Journ. vol. iv. p. 420.

[2] Is not this circumstance absolutely conclusive of the identity of the two diseases? Does not this peculiar smell of the extravasated fluids prove the sameness of the inflammation which yields them? and do not the various seats of the inflammation establish their kindred nature? For Dr. Clarke informs us it was not confined, in either case, to any one particular part.

(*a*) We have, at a venture, changed the number to 500 from 5000, believing there must have been an error in the text from which we quoted.

faces of the viscera, and of the peritoneum generally, will be found covered with a crust formed of a solid part of this matter, resembling coagulating lymph. Its particles cohere but slightly, so that, by a little agitation, it will mix with the fluid matter. The parts lying under this coat or crust *are not always inflamed.*[1]

If there be any interstices between the intestines, or the other viscera of the cavity of the abdomen, they are frequently filled with large masses of the same, making an accurate cast of such interstices.

"The quantity of fluid extravasated, and of the solid part floating in it, or incrusted, *is prodigious sometimes, when the disease has been of short duration, not exceeding two or three days.* They seem, also, as far as I am able to judge, *to bear no proportion to the degree of inflammation, or the extent of inflamed surface;* since we often find *a large quantity of both, where the redness of any surface has been very inconsiderable, and by no means general.* In most instances, there has been some slight degree of inflammation in some part of the cavity of the abdomen; but it has not been confined invariably to any particular part."

"Sometimes the peritoneal surface of the intestines, sometimes of the liver, and sometimes the investing membrane lining the muscles, have been found partially inflamed; but I have scarcely ever seen any extensive degree of inflammation in any case, and in some I could hardly say that there was any,"[2] p. 135.

Now, the only difference we can discover from the histories of the dissection of the two diseases is, that the neck of the uterus and bladder are *generally* more inflamed than other portions of the peritoneal surface: in every other respect, they are so faithfully alike, as not to raise a suspicion of a difference. It is true, that Dr. Clarke, and, perhaps, others who may have embraced his opinions, might insist that there are other very remarkable differences; but we cannot view them in this light; since the apparent discrepancies can easily be accounted for, without the necessity of supposing them unrelated to each other. We have marked by italics the points of resemblance.

We will first notice, however, the coincidences of appearances;

[1] Dr. Clarke's observation only amounts to this, that after effusion has taken place, redness is not always found; but this happens from a cause familiar to every practitioner; namely, that when inflamed vessels effuse serum, they become relieved, and the redness disappears.

[2] "We have, indeed, been told, that in the dissections of some who are said to have died of this disease (puerperal fever,) no appearances of inflammation have been discovered; but I should suspect, that in such cases some important appearances had been overlooked, or that error had been committed as to the nature of the disease, and probably in its treatment."—Denman, Introd. to Mid., Francis's Ed. p. 583.

"Whatever be the cause of puerperal fever, the cause of death is the same in all its varieties; namely, abdominal inflammation."—Gordon, p. 117.

and then attempt to account for the seeming differences. 1st. In both cases, the extravasated fluid, agreeably to Dr. Clarke's own statement, is the same; as he says, "it is of the same nature" in both instances. Now let us ask, is it probable that dissimilar diseases of the peritoneal surface shall produce fluids alike in every respect, as far as can be determined by their sensible or chemical qualities? and especially as Dr. Clarke observes, that "there is something very remarkable in the smell of this fluid, which distinguishes it from every other fluid." Does not this fact satisfactorily prove, if that inflammation of the peritoneum called puerperal fever yields a fluid of particular qualities or properties within the abdominal cavity; and if a fluid of precisely the same kind is found in the abdomens of those who die of "the low fever of child-bed," that the same action must have yielded both, and that they must be one and the same disease? We think the force of this conclusion is irresistible.

2. In the inflammation of the peritoneum, Dr. Clarke says the surfaces of all the viscera in their turn, or altogether, may be inflamed; he says, that precisely the same thing happens, but not to the same extent, in "the low child-bed fever:" it is then the degree of inflammation, agreeably to this, and not the absence of it, in the latter instance, that constitutes the difference of the two cases, for we think we have rendered it more than probable, from the nature of the fluids found in the abdominal cavity, that in both instances they are the result of a similar inflammation. Having cursorily remarked upon the coincidences of the fevers, we shall attempt to account for their seeming discrepancies.

I. Dr. Clarke tells us, that in the low fever of child-bed, a coat most probably of coagulating lymph, covers the whole or a part of the abdominal contents; but the parts under this coat or crust *are not always inflamed;* whereas, in the fever from peritoneal inflammation, this condition is obvious, especially about the neck of the uterus and bladder; and no crust is noticed.

This, at first sight, might lead some to suppose that a very material difference existed between the two diseases; and especially if they be not aware that a number of causes may make a difference in the intensity of any given disease; but especially in one so liable to become epidemic as puerperal fever. For the sporadic cases, of all such diseases as may become epidemic, are milder; and consequently more manageable than when they become epidemic.[1] If this be so, it can only happen from the sporadic cases acquiring the intensity which the epidemic constitu-

[1] This fact has ever been notorious in our yellow fevers. The histories of this disease, as it appeared in its several visitations in Philadelphia, show that the anticipating cases, if they may be so termed, were comparatively mild, and that the malignancy increased in proportion to the continuance of the disease, or at least until the type was modified by cool weather or frost.

tion of the air gives any particular epidemical disease. Thus, Dr. Leake says, that puerperal fever "will always be found most fatal when most epidemical; that is, during a distemperature of the air."—Treatise on Child-bed Fevers, p. 73. Mr. Hey says, "I am persuaded that this circumstance (the influence of the air) is deserving of the greatest attention; and that whoever attempts to cure an epidemic puerperal fever by such means as are commonly sufficient for the sporadic cases, will find himself greatly disappointed in the result," p. 13.

It is to be remarked, that this difference between a sporadic and epidemic disease is not confined to the puerperal fever; for it is incident to all the diseases, as we have said, which may become epidemical. This has frequently been experienced in the yellow fever, the dysentery, and the remittent and intermittent fevers of this country.

It is therefore probable, nay, we believe, certain, that the sporadic puerperal fever might furnish the description Dr. Clarke has given of the peritoneal inflammation, and the epidemical puerperal fever might afford the appearances recorded of "the low fever of child-bed," and yet be one and the same disease; that is, both caused by peritoneal inflammation.

But without resorting to these suggestions, which may be by some looked upon as gratuitous, we will mention a fact familiar to every body who has paid attention to epidemics, which is, that the reigning disease may differ very essentially in type at the different periods of its visitations. Thus, no two yellow fevers, as epidemics, were precisely alike in this city. The fever of 1793 was very different from that of 1798; and that of 1797 different from both, as regarded the conditions of the system; and this, consequently, made it necessary to change our therapeutical views. Yet, in all post mortem examinations, they were found to resemble each other in so many important points, as not to leave a doubt of the identity of the diseases.

Besides, an epidemical constitution of the air may exert an influence upon more than one disease at the same time; and this fact gives the strongest evidence of a distemperature of the air. Thus, Dr. Gordon informs us, that erysipelas, and the puerperal fever, "began in Aberdeen at the same time; and afterwards kept pace together; they both arrived at their *acmé* together, and they both ceased at the same time." Treatise on Puerperal Fever, p. 50.

Dr. Clarke says, "Inflammatory diseases had been extremely infrequent; or, if they occurred at all, they were principally of the erysipelatous kind. Eruptive diseases, particularly those which are attended with great depression of strength, had attacked great numbers of patients. The ulcerous sore throat, with or without scarlatina, had been very general, both in Lon-

don, and also in the country at a distance from the capital. Most of the fevers had been of the low, nervous, and malignant kind, approaching to that type which has been by some called putrid," p. 115.

"About the same period, also, in *some situations* in the country, especially in low marshy places, the generality of patients under inoculation had recovered with great difficulty. Abscesses formed in the axillæ; large ulcers and sloughs took place, both there and at the place of insertion of the matter,"[1] p. 116.

Again, "The stimulus of her labour, (the woman whose case he is relating,) brought on a degree of fever, which *degenerated in consequence of the nature of the then prevailing epidemic constitution, into a low type*," p. 150.

Yet, with all this evidence before him, Dr. Clarke insisted on the slight difference which he had observed between the sporadic puerperal fever, (for such were the cases of peritoneal inflammation which he describes,) and "the low fever of child-bed," which was a puerperal fever, or an inflammation of the peritoneum, in an epidemic form, to be different diseases; and seriously admonishes the young practitioner not to mistake the one for the other. Every body familiar with the diversifying influence of an epidemical constitution of the air, knows the variety of type it will force the same disease to assume, at the different periods of its visitations, or even in different situations. Some, who have not been attentive to the influence of the cause just mentioned, and who neither recognise its existence, nor acknowledge its power, have been led into serious, and we had nearly said, absurd errors, on the subject of puerperal fever. Thus, Dr. Kirkland supposes that the *genuine puerperal fever* is never epidemic; at least he says, that "the puerperal fever which has been observed in hospitals, is owing to some causes peculiar to hospitals;" and that when it occurs in such places, "it should be considered as an adventitious disease, happening to women in child-bed."—Treatise, p. 73.

When we consider the circumstances under which females are placed, even in the best regulated hospitals, we are nowise surprised that the puerperal fever should be more common, and more fatal to them, than to patients in private life. That there may be, and most probably are, causes in hospitals, which pretty constantly operate in such a manner as to give a peculiar type to a disease similar to that which an epidemic constitution of the air might effect, we have no hesitation to believe; since, in such situations, the disease is not only more common, but is some-

[1] Much more difference will be perceived between the small-pox under ordinary circumstances, and the form it assumed in the cases just stated by Dr. Clarke, than between "peritoneal inflammation" and "the low fever of child-bed," yet Dr. C. did not hesitate to call both "small-pox."

times exclusively confined to them. But in granting this, it does not do away the possibility of its prevailing as an epidemic elsewhere.

Indeed, the history of this disease as an epidemic, abundantly proves that the situations remote from hospitals, or even from cities, have been visited by this fatal malady.[1] On this head Mr. Hey says, that "It must be allowed that the puerperal fever has occurred, as an epidemic, most frequently in hospitals; but if any proof were wanting that it may be epidemical, independently of any cause peculiar to hospitals, that proof is abundantly supplied by the instances of this fever which have occurred at Aberdeen and Leeds; where it was not confined to situation, rank, or circumstances; affecting alike the rich and the poor, the young and the old, the inhabitants of the town and of the country," p. 12.

Besides we are quite at a loss to comprehend the meaning of Dr. Kirkland's appellation, "the genuine puerperal fever," if a distinction be intended by it; for a fever happening to a lying-in woman must be a genuine puerperal fever, if the peritoneum be inflamed; or, if it be not inflamed, it must be some other variety of fever; therefore, a puerperal fever must be a genuine puerperal fever, or it is no puerperal fever whatever. A spurious puerperal fever cannot exist: for, unless the peritoneum be involved in inflammation, there is no propriety in the title; and if it be, it cannot be other than genuine.

But to return, Dr. Clarke says, that "the parts under the crust or coat," (of coagulable lymph,) "are not always inflamed;" this must be certainly understood to declare, that they generally are; and, if they generally are, the appearance of inflammation must produce a stronger resemblance to the peritoneal inflammation, than he appears to have been willing to admit. Not that we consider this circumstance essential to the establishment of our position, that the peritoneal inflammation of child-bed women, and "the low fever of child-bed," are one and the same disease.

For, had Dr. Clarke told us he had never found "the parts under the crust or coat inflamed," it would not have permitted us to doubt for a moment the identity of the affections, for the reasons stated above. For this, and every other species of inflammation may throw out even large quantities of fluid under certain stages of its continuance; but when it does, the inflammation which gave rise to the effusion becomes relieved, either altogether, or in part, as this effusion may be more or less extensive, or as the inflammation may have been more or less exalted.

[1] We have noticed above the prevalence of puerperal fever, as an epidemic in Northumberland (in this state,) and its neighbourhood; situations very remote from either hospitals, or towns of any considerable size.

These effects are familiar to every body; for they present themselves to us almost daily, in the consequences of burns, scalds, and blisters.

II. We are led to suppose, that Dr. Clarke infers a difference in the two diseases under consideration, from the immense quantity of fluid found in the cavities of the abdomen of those who have died of the "low fever of child-bed," and which bears no proportion to the "degree of inflammation, or the extent of inflamed surface," and the extent of the inflammation and the smaller quantity of fluid found in the abdomen of those who died from peritoneal inflammation.

Now, in our estimation, this should show the most entire identity of the two diseases, instead of proving a difference. For, in the one instance, there was a stronger disposition to effusion arising from the peculiarity of the inflammation, but which peculiarity was the result of an epidemic influence; and the reduction of this inflammation kept pace with the profuseness of the effusion. In the other instance, the same circumstances obtained precisely; that is, the abatement of inflammation was in exact proportion to the effusion; hence, more inflammation and less effusion was discoverable in one case than in the other; because, in the one case the extent of inflammation was less, or there was less disposition to effusion.

Physicians and surgeons have ever entertained their own notions as regards the type of every epidemic with which we are acquainted: and their mode of treatment must, consequently, be predicated upon such opinions. Thus, in the yellow fever of 1793, some physicians looked upon it as a "putrid fever," and, accordingly, treated it with bark, wine, and other stimuli; while others considered it slightly inflammatory in the commencement, but typhoid in its progress: these bled a few ounces on the first or second day; purged gently; and then used bark, wine, carbonate of ammonia, &c. Others looked upon it as a fever of high inflammatory character; to subdue which, extensive, and sometimes repeated bleedings, profuse purging, and a strict antiphlogistic plan was pursued. Now, it cannot be supposed, that all these opinions were right; yet each attempted to support the propriety of his practice, by detailing such phenomena and effects as were most likely to answer this end. Hence resort was had to dissections, and each found a justification of his practice, as he supposed, in the post mortem appearances. But, after awhile, it was discovered, that the first plan was entirely without success; that the second had some, but it was very limited; while the third was attended by a fair proportion of recoveries.

Just so has it been with puerperal fever; for the rapidity of its march, and the strong tendency of the body after death to putrefaction, led to the belief that it could be no other than a putrid, or

typhoid fever; and the want of success in curing it, by the remedies proper for such diseases, was not attributed to the improper nature of the means employed, but to the indomitable nature of the disease itself. Therefore, wrong pathological views led them either to a feeble or inefficient practice, or to one decidedly wrong.[1]

Dr. Clarke, intent upon advancing the interests of his profession, and indefatigable in the duties which a large share of business constantly imposed upon him, attempted to remove the obscurities which seemed always to await this formidable disease, by making the various affections of the puerperal state conform to a certain classification. With this in view, he divides the derangements of the uterine system,[2] and the peritoneum, into the following classes:—

1st. Into the inflammation of the uterus and ovaria.
2d. The inflammation of the peritoneum.
3d. Cases of inflammation of the uterus, ovaria, and Fallopian tubes, or of the peritoneum, connected with an inflammatory state of the system.
4th. The low fever of child-bed, &c.[3]

The doctor was solicitous that these several affections should not be confounded; to prevent which, he admonishes the inexperienced practitioner in the following words: "Before I close this part of my subject, I must beg leave to caution those of my readers, whose experience may have been short, to be very careful in distinguishing these diseases from cases of fever consequent to labour, occurring in debilitated constitutions, in large towns,

[1] It is but just, however, to state, that the researches of Tonnellé and Duplay have led to the conclusion, that puerperal fever does not always consist of a purely inflammatory action—but on the contrary, that in "la Maternité," this condition was comparatively rare; hence, they have divided it into the inflammatory, typhoid, and the ataxic varieties. The typhoid was by far the most frequent, and the ataxic the most rare, while the purely inflammatory occurred but thirty-nine times in two hundred and twenty-two of the fatal cases examined by them. This, however, must only be received as the reports of the type of the disease as it appeared in that hospital; and though no modifying circumstance could be discovered in that institution, yet it is every way certain there must have been one, and that this account will not serve as an infallible guide for the treatment of this disease in this country. This peculiarity in the influence of an hospital atmosphere has been lately proved in the Pennsylvania Hospital of this city; for the cases of puerperal fever which presented themselves were fatal in an unprecedented degree, yet this disease was confined to this place, as it did not occur in private practice, at least we did not meet with a single case. Yet even in the most frequent form of this disease, (the typhoid,) in the Paris Hospital, it was acknowledged that the typhoid symptoms were preceded by an *inflammatory stage*, and this is all that we absolutely contend for.

[2] By the uterine system, we would wish to be understood only such portion of it, as is within the abdominal cavity, or such parts as have a peritoneal covering.

[3] Modern pathologists pay no attention to which part the inflammation makes its appearance—it is very essential to the production of puerperal fever that any portion of the serous or peritoneal coat be the seat.

and in hospitals more particularly, where there is any disposition to epidemic complaints, which have a low tendency," p. 92.

But, notwithstanding the apparent propriety of these divisions, and the earnestness of his cautions, he has not, in the smallest degree, facilitated "those whose experience may have been short," (and we may add, those whose experience has been long,) to distinguish, with any profitable accuracy, the different conditions he has described. Nor is this to be wondered at; as he has, in the very threshold of his inquiry, created confusion by neglecting a most important part of his subject; namely, not informing us, in what, or from what, condition of the system this fever proceeds.

For it will be perceived, that notwithstanding his attempts at distinctions in this division of the seats of this disease, they are truly without differences; as they are at last all resolvable, and this, strictly speaking, into peritoneal inflammation. In his first division, he declares the uterus and ovaria to be involved: now, it is obvious in this case, that the ovaria cannot well be inflamed to the exclusion (for we will omit the condition of the abdominal portion of the uterus) of their peritoneal covering; consequently this first division must mean "puerperal fever," if this fever consists of an inflammation of the peritoneum, as we have already insisted on.

His second division, à fortiori, must be considered as puerperal fever; since its distinctive mark consists in an "inflammation of the peritoneum." We have already noticed, p. 354, Dr. Clarke's attempt to institute a distinction between this condition of the abdomen, and the "low fever of child-bed;" we shall, therefore, not repeat what we have said there.

His third division is still more exceptionable; because it insinuates that an inflammation of that portion of the peritoneum which covers the uterus, ovaria, and Fallopian tubes, is different from an inflammation of other portions of this membrane; and he considers it necessary that an inflammation of these parts should be distinguished from inflammation of other portions of the peritoneum, which we hold to be impossible. And were it possible, no kind of practical good could result from the discrimination.

His fourth appears to be in opposition to his own facts, or even reasonings. In this, he attempts to prove that "the low fever of child-bed" is not a peritoneal inflammation. We have already noticed this effort, p. 354.

From what we have said, we think we may safely draw the following conclusions: first, that the distinctions attempted to be made, of an essential difference in the nature of the disease from the location of the inflammation within the abdomen, is without foundation. For it does not appear, from all we learn from others, that the inflammation of puerperal fever is ever confined,

strictly, to any one portion of the peritoneum; and from Dr. Clarke's own acknowledgment, "The surface of the stomach, liver, spleen, omentum, great and small intestines, uterus, the internal lining of the muscles of the abdomen, will, in their turn, or altogether, be found to partake of the disease; and, as far as my experience leads me to judge, *no part more than another*." See page 355.

We must look upon the peritoneum as a unit; and that when inflamed in any one part, the same general symptoms will arise; and that the whole of it is now liable, from this cause, to be involved in the same condition as that part: hence, if the inflammation commence at any given point, it may travel over the whole, or a great portion of its surface, or it may be confined to the original focus.

A want of attention to this circumstance has led all the writers,[1] so far as we recollect, into the error of considering the inflammation of the peritoneal covering of the uterus as a distinct disease from puerperal fever, by calling it an inflammation of the uterus. In this, there is a great want of precision; for the inflammation of the uterus, properly so called, is a very distinct disease from peritoneal inflammation. (See Chap. on Inflammation of the Uterus.)

Dr. Denman very properly observes, "There is undoubtedly much difficulty in forming a just idea of a very complicated disease; and in proportion to the difficulty, every attempt to make accurate distinctions is deserving of commendation." To this we most willingly assent. But he adds immediately after, "But, however symptoms may vary from affections of particular parts, or in particular constitutions, there is but one essential nature of the disease; and if we have a true notion of this, we have less reason to be solicitous about the cause, or the determination of the part originally or principally affected. For a similar treatment may be enjoined, with equal propriety, for an inflammation of the uterus, omentum, peritoneum, or intestines, or perhaps any of the contents of the abdomen; whether the disease remain local, or a fever be produced by its influence being extended to the constitution in general."—Introd. to Mid., Francis's ed. p. 565.

Yet is Dr. Denman himself betrayed into a want of precision in the very next sentence; for he says, that "the inflammation of the uterus is far less dangerous than an equal degree of inflammation of any of the viscera of the abdomen, especially in the

[1] Dr. Armstrong might have been looked upon as an exception, as he mentions "simple hysteritis;" did he not immediately after appear to lose sight of the distinction, by following Dr. Denman and Dr. Baillie; especially the latter, who speaks of "inflammation of the uterus and its appendages," under the head of inflammation of the uterus.—Morbid Anatomy, p. 362. See also text below.

state of child-bed; because the uterus readily admits of a return of the lochial discharge, which always affords relief, and sometimes cures the disease."

Here we are at a loss to understand, whether by an inflammation of the uterus, it is intended to include its coverings, or to strictly confine the inflammation to the substance of the uterus without its covering being involved. We are, however, inclined to believe he meant the whole mass of this organ, from what immediately follows: "Because the uterus readily admits of a return of the lochial discharge, which always affords relief, and sometimes cures the disease."—Ib. We shall merely remark upon this last passage, en passant, that Dr. Denman has evidently mistaken an effect for a cause. For, in inflammation of the uterus, the lochia do not return until this condition is relieved; and if the inflammation be relieved by any cause, so as to permit the lochial discharges to return, it is evident that the reduction of the inflammation is the cause of the return of the lochia, and that the disease is subsiding, but not a proof that the lochial discharge is the cause of the diminution of the inflammation; for this discharge would not take place unless preceded by this reduction of inflammation, though it may ultimately contribute to this end by its continuance.

Dr. Armstrong, however, quotes the above passages differently: he makes Dr. Denman to say, "When *simple hysteritis* takes place," &c. But this reading of Dr. Armstrong is entirely gratuitous; for there is no mention made of the simple inflammation of the uterus by Dr. Denman; and this is the very fault we complain of. Nor does Dr. Baillie discriminate any better; for, in speaking of the inflammation of the uterus, he says, "the inflammation is sometimes confined to the uterus itself, (evidently meaning it as a whole,) or its appendages;" and that he means to distinguish this organ from its neighbouring parts, is indisputable; for he adds, "But the peritoneum in the neighbourhood is most commonly affected, and frequently over its whole extent." That is, (as we understand it,) when the uterus is inflamed, the neighbouring peritoneum is also most commonly inflamed; consequently, if this be so, it is, to all intents and purposes, puerperal fever, and not a simple inflammation of the uterus.

It would, in our opinion, be always best, when post mortem examinations are related, in which the fundus of the uterus is found inflamed, to say that the peritoneal covering of the uterus was found "inflamed;" instead of saying, "The uterus was inflamed;" for this may not have been the case, strictly speaking, —See Chapter on Inflammation of the Uterus.

And, secondly, we may conclude that Dr. Clarke has failed to establish any other difference between "peritoneal inflammation," and the cause of the "low fever of child-bed," than that which is

frequently observed to exist between "sporadic and epidemic puerperal fever." We have already said enough respecting epidemic influence, to convince any one of the extent of its agency upon this, and many other diseases.

Of the Period of Attack, and Symptoms.

In comparing the histories of the symptoms of this disease, as detailed by a number of authors, with what we ourselves have seen, we think, taking the whole of the description together, that drawn up by Dr. Denman appears to be the most faithful. It seems to be the result of very extensive observation, and combines, within a very moderate space, all that is essential to discriminate the disease in its commencement; and to recognise it easily in its advancement and terminations. For this reason, we will detail the symptoms and characters of the disease in his own words. We are the more disposed to do this, because our experience, though sufficient to convince us of the fidelity of his account of the disease, has not been so ample as to enable us to make any important divisions.

"The time when women are chiefly subject to this fever is uncertain. There are not wanting instances in which it has been evidently forming before delivery, or during labour, or at any intermediate period for several weeks afterwards; and the sooner from the time of delivery the patient is attacked, if in an equal degree, far greater is the attendant danger. But the most frequent time of its appearing is on the third or fourth day after delivery,[1] when the patient is seized with a shivering fit, from the violence and duration of which, we may generally estimate the danger of the succeeding disease.[2] In some cases, however, there has been no cold or shivering fit, or none which was observable; and in others, the shivering fit, in the state of child-bed, has not been followed by those symptoms which were to be apprehended.[3]

[1] Authors differ a little as to the period at which the disease may attack after delivery. Hey says, about forty-eight hours; Armstrong, from twenty-four to thirty hours; Clarke, on the second, third, and even the eighth day; Leake, on the evening of the second day, or the morning of the third, &c.

[2] This disease is not always announced by rigour or chill. Hull, Hey, Armstrong, Leake, &c., agree it is generally preceded by shiverings; but that they are by no means essential to its formation. Clarke says it rarely happened. Mr. Hey says that "some of the worst cases were unattended by rigor; and in others, equally severe, there was no more than a slight chilliness," p. 28. And Dr. Marshall Hall says that in puerperal diseases, "pure inflammation is less marked by rigour, heat, and other obvious symptoms, than the effects of intestinal irritation."

[3] Dr. Denman has not discriminated with his usual accuracy in this instance: a mere shivering, or rather trembling after delivery, is no very uncommon occurrence; but this agitation is not accompanied by the *sensation of cold*, though it goes under

"Before the shivering fit, the patients have been much debilitated,[1] and have complained of wandering pains in the abdomen, which very soon became fixed in the hypogastric region, where a swelling or fulness, with exquisite tenderness, soon ensued.[2] As the disease advances, the whole abdomen becomes affected and tumefied, sometimes nearly to its size before delivery, the woman herself being sensible of, and describing its progress. She also feels great pain in the back, hips, and sometimes in one or both legs, and other parts affected in uterine complaints.

"She scarcely can lie in any other position than on her back, or on one side with her body incurvated; and if the disease be confined to the uterus, the seat of the pain seems to be changed when she alters her position.[3]

"There is either a vomiting of a green or yellow bitter matter, or a nausea or loathing of the stomach, with an offensive taste in the mouth.[4] An instantaneous change both in the quantity and appearance of the lochia takes place; and sometimes, though rarely, they are wholly suppressed.[5] The milk, if se-

the name of a *chill or shivering*, by those who are unacquainted with the phenomena of fever. It is, therefore, represented to the physician as such; but he does not find it to be followed by reaction; hence it is said, the chill was not followed by fever.

[1] We presume Dr. Denman means, by their being much debilitated, a sudden loss of strength, which is by no means uncommon, previously to the attack of severe and dangerous fevers; this is remarkably the case in those seized by yellow fever. It cannot mean, they "were much debilitated" by the fatigue of labour; for he and many others declare that the contingencies of labour do not appear to have any agency in the production of the disease.

[2] We would wish to direct the attention of the reader to this circumstance; it is one in which all appear to agree; and which seems to settle the point agitated by Dr. Clarke and others, namely, whether the fever was the consequence of a local inflammation of the peritoneum; or whether the inflammation was the consequence of the fever; for it is here declared, pain, &c., existed before the rigour.

[3] Dr. Denman unquestionably means, by the "uterus," the peritoneal covering of this organ and its appendages. But this mode of expressing the condition of this part must unavoidably create confusion, as we have taken occasion to remark in another place, as this viscus is liable to become inflamed, independently of its peritoneal coat, and which is a very different and much less dangerous disease. Mr. Hey is also faulty in this respect, for he says, "But all the varieties, so far as I can judge from my experience and reading, may be reduced to two denominations, the sporadic and the epidemic puerperal fevers, in which I include *inflammation of the uterus and peritoneum*. Dr. Armstrong runs into the same error.

[4] Dr. Clarke supposes that many of the local symptoms arise from an inflammation of that portion of the peritoneum which may invest the particular organ or part, "such as constant sickness and vomiting of bilious matter, when the stomach is attacked," p. 84. This we believe to be a sound explanation of the vomiting when it occurs in puerperal fever, unless it be in such instances, in which this action proceeds from offensive matters in the stomach. But vomiting is by no means a constant symptom in the early stage of peritonitis; indeed we would say that it is rare, if our limited experience will authorize such a declaration; and when it does occur, it is almost always in the second: it is then obstinate, and may be regarded as a most unfavourable symptom; and this for the reason assigned by Dr. Clarke.

[5] All the writers on the subject of puerperal fever agree in the uniformity of

creted, recedes, or is diminished, and the taste, with the appearance, is much altered.[1]

"The urine is voided often, with pain, and in small quantities, and is remarkably turbid. A tenesmus or frequent stools come on, and, from the general disturbance, it is often manifest that all the contents of the pelvis are at once affected by the disease.

"The tongue becomes dry, though sometimes it remains moist, and is covered with a thick brown fur; but, as the disease advances, its appearance varies, and in some dangerous cases it has been little changed.[2] The patient immediately entertains the strongest apprehensions of her danger, and usually labours under vast anxiety, her countenance bearing indubitable marks of great suffering both in body and mind.

"The progress of this disease is sometimes extremely rapid, and especially in unfavourable seasons, and in hot climates. Instances have occurred in which women have died within twenty-four hours after the first attack; and I have seen a few who never grew warm after the rigour, which then resembled a convulsion. In some, death has followed quite unexpectedly, either from inattention, or from the scarcely perceptible but insidious progress of the disease, the indications not having been at all proportionate to the danger.

these symptoms. All declare the change which takes place in the lochia immediately after the disease is formed, if we except Leake, who says it was not affected either in quality or quantity; a presumption, he says, that the uterus was not affected; and all agree that it constitutes one of the most decided symptoms in this complaint. By what agency is this change effected? Does it prove that the uterus, both in its substance and covering, is always implicated in this disease? or does it show there is a prevailing sympathy between the inflamed peritoneum and the surface which yields the lochia? Is the first rendered probable by the lochia being deranged when the substance of the uterus is known to be affected, in the same manner as when the peritoneum is inflamed? Mr. Hey, however, says it is sometimes not affected, p. 23. Are we to pronounce in such cases that the uterus is uninjured? or, if not uninjured, what part has escaped.

[1] The want of secretion of the milk, if the disease occur before the breasts are prepared for it; and its cessation, if it has been secreted immediately after the formation of puerperal fever, is one of the most uniform, as well as one of the most remarkable symptoms attending this disease; and it would seem to prove one of two things: first, that the inflamed peritoneum has a control over this secretion, a sympathy only manifest at this particular time; or secondly, that that condition of the uterus by which the mammæ are influenced to the secretion of milk, is changed, by the presence of inflammation, either in its covering, or substance, or both: but most probably from its peritoneal covering being affected, as in simple hysteritis, the breasts are never so much affected, and sometimes not at all.

[2] Mr. Hey, in speaking of the Leeds puerperal fever, says, "The tongue was never incrusted with the brown dry fur of typhus, except the disease was of long continuance, or had been improperly treated. It was generally moist and soft, and though it was not unfrequently covered with a thick white or brownish fur, yet it was often but little altered from its natural appearance, to the last, even in bad cases," p. 32. Dr. Armstrong says, "The tongue was much paler than usual, and appeared as if it had been recently rubbed or dusted with a very fine whitish powder: in some instances the tongue was tolerably clean and moist about the edges," p. 2.

"In other cases the shivering fit is succeeded by heat, thirst, and other symptoms, according to the course observed in other fevers; but the pain which originated in the abdomen, joined with these, is to be esteemed the pathognomonic or chief sign of the disease. It seems necessary to enumerate all the symptoms, which commonly, though not exclusively, attend this fever, and not in any individual patient; yet cases will occur in practice, in which there will be much variation, depending on the degree of disease, the parts affected, the constitution of the patient, and the period after delivery when the fever makes its appearance.

"The pulse has almost invariably, in this disease, an unusual quickness from the beginning.[1] It has often that strength and vibration observed in the disorders of the most inflammatory kind, in robust constitutions; and yet is sometimes exceedingly feeble and quick, beyond what might be expected from the concurring circumstances. The latter is to be reckoned among the most dangerous signs, proving, perhaps, increased irritability, with great violence of disease, and that the powers of the system are unable to struggle with it, or scarcely to bear the operation of the medicines which might be necessary for its relief.

"There is much variation in the subsequent stages, but there is scarcely a worse omen than a very weak and accelerated pulse, even though the other symptoms may seem to be abated. But the mere quickness of the pulse, if not attended with other perilous signs of inflammation or fever, is not to be considered

[1] The frequency of the pulse in peritoneal inflammation has been so invariable, agreeably to our observations, that we regard it as pathognomonic. We were, therefore, not a little surprised to find this condition of the artery denied by Dr. Marshall Hall, in his Essays on some of the more important Diseases of Females, p. 177. He says, "Frequency of pulse is not a less uncertain indication of inflammation (peritoneal.) I am enabled to say, from careful observation, that the pulse is but little accelerated in many cases of puerperal inflammation within the abdomen, whilst it is excessively, and even alarmingly, frequent in some cases in which inflammation does not exist." We cannot but suspect that the doctor labours under a great error in this statement; at least, in the first part of it—we think he has probably confounded *pure hysteritis* with peritoneal inflammation. See page 365. The latter declaration we fully agree to; but it adds no support to the former part of his observations. We are the more inclined to suspect a want of accuracy in Dr. Hall's observation, from the loose manner in which he has conveyed his notions of the seats of the inflammation constituting the disease in question. For he says, "Considering the important and sudden changes which take place in the condition of the uterus, in parturition, we cannot be surprised that its appendages, the adjacent viscera, and the peritoneum at large, should, not unfrequently, participate in this morbid condition," p. 156. Now, from this quotation, it would appear evident that the appendages of the uterus, and the abdominal viscera may be inflamed in puerperal women, independently of the peritoneum, a circumstance that has not, we believe, been verified by late pathological research. The uterus itself may, beyond all doubt; but the abdominal viscera do not appear to follow this rule. Dr. H. seems to forget that Bichat has taught us that investing membranes may be inflamed without implicating the other tissues of the organs over which they spread; and, consequently, that an inflammation of the peritoneum covering the liver, is not an inflammation of this organ, &c.

as indicating danger; experience having shown that very irritable patients have sometimes an unusually quick pulse, unaccompanied with any other alarming symptom.

"The signs of inflammation, joined with those of extreme irritability, continue for a few days, when those of putridity appear; sooner, perhaps, in this, than in most other diseases, which are originally of the truly inflammatory kind.[1] The teeth very early collect a brown adhesive sordes, and all kinds of food and drink are nauseated, except such as are agreeable from their coldness or sharpness.

"A singultus attends; every return of which affects the abdomen in the most painful manner. Petechiæ or vibices are often found in unwholesome situations, and in some constitutions of the air, at a very early period of the disease, and there are frequently miliary eruptions; but the latter seem to be rather a consequence of the method of treatment than of the disease, for they do not afford that relief which sometimes follows their appearance in true eruptive fevers.

"The bowels are in general very much disturbed, and in some cases a looseness takes place immediately upon the accession; in others, in three or four days after, or not till the last stage of the disease; but it very seldom fails to attend, nor can it be removed without the greatest difficulty, as well as danger, before the disease is terminated. The stools, before the close, often come away involuntarily, being always preceded by an increase of pain; and every evacuation gives a momentary relief. They are uncommonly fetid, of a green or dark brown colour, and working like yeast. It is also remarkable that, after the long continuation of the looseness, when the patient has taken little or no solid nou-

[1] This circumstance is familiar to all who have witnessed the most inflammatory of all fevers, namely the yellow fever. This disease runs its course sometimes with such rapidity that the stages, from the highest inflammation to that of gangrene, can scarcely be observed; bidding defiance, very often, to remedies of every kind. Indeed, we may remark it to be the common course with all the diseases of very high excitement, when not under the control of medical applications, to terminate in the manner just noticed of puerperal fever. It was this rapid course, with puerperal fever especially, which gave rise to the conflicting accounts we have of its nature; (its termination in gangrene, or in "putridity," as it is called,) and which regulated, with too many, the mode of treatment in the commencement of the disease. The apprehensions suggested by its peculiar termination, made physicians spare, or rather dread, the employment of the only remedies capable of preventing such an issue. Thus, both Dr. Gordon and Mr. Hey, (indeed, we might enumerate others,) after they used, with liberal hand, blood-letting and purging, rarely lost a patient. Dr. Gordon did not lose a patient out of thirty that were treated by ample blood-letting and liberal purging; and Mr. Hey seems to have been successful in equal proportion. The great secret in treating such diseases as yellow fever and puerperal fever, (at least, under ordinary circumstances,) consists in preventing the death of the blood vessels from over-excitement, by bleeding, &c. Mr. Hunter explains this by saying, "Debility begins very early, because the inflammation itself is interfering immediately with the actions of life."

rishment, large and hard lumps of excrement will be sometimes discharged, which one might suspect to have been confined in the bowels a long time before delivery. With regard, however, to this symptom, it is very necessary to observe, that in delicate constitutions, great disturbances of the bowels are frequently occasioned by mere irritation, which are soon removed by the well-timed exhibition and repetition of some cordial opiate.

"There is a peculiarity in this fever, which I believe has not been hitherto observed or mentioned. It is an erysipelatous tumour, of a dusky-red colour, on the knuckles, wrists, elbows, knees, or ankles, about the size of a shilling, and sometimes larger. This is almost universally a mortal sign, and on the inspection of those who have died with this appearance, the disease has been found to have affected the uterus principally, or its appendages.

"When this fever commences soon after delivery, and continues its progress with violence for a few days, our hopes of a favourable event will often be disappointed, and the impending danger may usually be foretold by the uninterrupted progress of the symptoms, or by returns of the rigour. A looseness immediately succeeding the attack, though in one sense it may indicate the degree of disease, always contributes to its abatement, and sometimes proves critical; as does likewise a spontaneous vomiting, sometimes even towards the last change, when all hopes of recovery were abandoned.

"The profuse sweat, which follows the shivering fit, has very often been completely critical. In some there has been a translation of the disease to the extremities, where the part has inflamed, and a large abscess has been formed: a similar abscess has also in some cases been formed on one side of the abdomen, which has been healed by the most simple treatment.

"Fresh eruptions of the lochia are always a favourable symptom, and are to be reckoned among the most certain signs of amendment. A subsidence of the abdomen after copious stools, and with a moist skin, is a fortunate alteration for the patient; but that circumstance, without evacuations, and a dry skin, threaten the utmost danger." Introd. Mid. Francis's Ed. p. 568, et seq.

Dr. Clarke, p. 121, and other writers, have noticed a symptom of a remarkable kind, to which we have also borne witness, and which, so far as we have observed, has always been a fatal one; namely, the indifference of the mother to the child, and sometimes even refusing to suckle it. From whence does this indifference proceed? or why should it be a symptom of so much danger?[1]

[1] It has lately fallen to my lot to see a case of completely developed puerperal fever, in which this symptom proved fallacious. This case will be related presently.

Dr. Clarke, p. 123, accounts for this state of the mind in an ingenious and plausible manner, by observing, "It is probable that the secretion of the milk in the gland, and the desire of suckling, may be in some way connected with each other, and the existence of the desire may depend upon the presence of the secretion, in like manner as the power of secretion in the testicles produces the passion for propagation; and the passion in its turn affects the disposition for secretion." But to what circumstances shall we attribute this total extinction of sympathy between parts so constantly in the habit of exercising it? Is it owing to any condition of the uterus itself? or does it arise from the peritoneal inflammation simply? or does it require the ovaria to be involved? Is this last conjecture strengthened by the fact, that the breasts become flaccid and waste away, when these organs are severely diseased, wasted, or extirpated?

Of the Diagnosis.

The disease we have been describing has so many well-marked characters, that it cannot well be confounded with any other affection; and we believe that we may safely rely upon the following symptoms for its diagnosis:—

1st. Pain or tenderness in the hypogastric region, occurring after delivery, from the first few hours to several days.[1]

2d. Swelling or tension in that portion of the abdomen where the pain or tenderness is felt.

3d. By these symptoms almost always being followed by a chill or rigour, of longer or shorter duration, or greater or less force.

[1] Mr. Hey says that the pain experienced by the woman, soon after delivery, "was a very deceitful symptom; and when it was not preceded by rigour, occasioned great embarrassment by the irregular manner of its attack; and the consequent difficulty of distinguishing it from after-pains," p. 30.

We believe that the following marks will, with much certainty, distinguish the pain of peritoneal inflammation from that of "after-pains."

1. After-pains are always alternate, and regularly have three periods—a period of increase, acmé, and decline; they always observe regular intervals, be these longer or shorter.

2. The pain, when occasioned by after-pains, is never so acute; and is confined to the lower part of the hypogastric region.

3. There is always more or less discharge of the lochia, during the continuance of the after-pain, and this without a change in its appearance.

4. The mammæ are not interrupted in their offices, if the pain proceed purely from uterine contraction.

5. If the hand be laid upon the abdomen, during the pain, the uterus will be found very hard at one moment, and softer the next.

6. The pulse will never be so much accelerated, as when the peritoneum is the seat of the disease; but both of these pains may be united; and when that is the case, the pain arising from the contractions of the uterus offers no indication, as it is then of minor importance.

4th. By the rigour being followed by reaction, terminating, for the most part, in a profuse sweat, and without this sweat moderating the fever or other symptoms.[1]

5th. By this fever being accompanied by an accelerated pulse; rarely less than one hundred and twenty, and oftentimes as many as one hundred and fifty or more strokes in the minute.

6th. By the absence of milk in the breasts; either because it has not been secreted, or because the secretion has been interrupted.

7th. By a diminution, alteration, or suspension of the lochial discharge.[2]

If a woman, within a short period after delivery, be attacked with the above symptoms, we may, we think, with much safety, pronounce her to be labouring under peritoneal inflammation, or puerperal fever. In this enumeration of symptoms, we have confined ourselves to the mention of such only as may be considered as almost exclusively pathognomonic.

There are many other symptoms besides those enumerated that attend this disease; and, perhaps, each individual case may be attended by some one peculiar circumstance, which does not obtain in others, but which may be dependent for its existence upon some peculiarity of constitution, or accidental cause. It is, therefore, impossible to anticipate every symptom which may arise in any given instance. The symptoms, as detailed by Dr. Denman, we believe, comprise every thing essential in the history of this fever, from its formation to its termination. And we trust, from what has just been laid down, that this disease cannot well be mistaken for any other.

[1] Dr. Denman, as noticed above, says this sweat has, in many instances, proved critical.

[2] We have elsewhere remarked that Dr. Leake says, "The lochia, from first to last, were not obstructed," p. 52.

Dr. Leake's account is of an epidemic puerperal fever, which attacked the patients of the "Westminster Lying-in Hospital," and the disease, as it appeared there, was of a very remarkable character in several important points; and differed from every other of which we have read any account.

1. There was very little pain in the abdomen.
2. Very much less frequency of pulse.
3. The uterus almost invariably sound.
4. Little change in the powers or functions of the mammæ.
5. No change in the lochial discharges.
6. The omentum being the chief seat of disease, or found "melted down."
7. An unusual degree of headache.

From Dr. Leake's account, it is evident that the epidemical constitution of the air had imposed a very mild character on this disease—its inflammation appeared to be of the phlegmonous kind, from the quantity of suppurated fluid found upon dissection, and from the common expression of the "omentum being melted down," &c.; and it is farther evident, we think, that, had he carried his bleedings, &c., farther, he would have cured all his patients.

Of the Prognosis.

There is, perhaps, no disease, upon the issue of which the physician of experience feels greater reluctance to pronounce than puerperal fever. This unwillingness proceeds from several causes, each of which suggests the propriety of caution in making a decision.

First, From its very frequent tendency to a fatal result, even under the most prompt, proper, and vigorous treatment.

Secondly, From the rapidity of its march it gives but small opportunity oftentimes for the operation of remedies, even when they are applied early.

Thirdly, From the impossibility, very often, of repairing the ravages a few hours' neglect has occasioned, however faithfully and properly the remedies may be afterwards employed; and,

Fourthly, From the oftentimes treacherous nature of the disease, which will sometimes suddenly terminate in death, when circumstances apparently promise recovery.

These reasons should teach the young practitioner to be extremely guarded in his prognosis, lest disappointment follow improperly raised hope; or recovery take place when he had caused it to be abandoned. We may particularly caution him against that deceitful amendment recognised by most writers on this subject, which takes place sometimes as early as the first twenty hours, or as late perhaps as the third day. Here the abatement of pain, the diminution of the soreness of the belly, the subsiding of the abdominal swelling,[1] the less frequency of the pulse, seem but the prelude to a condition, from which no human exertion, or power of remedy, seems capable of saving the patient.

Yet the symptoms now mentioned are precisely those upon which we would build our hopes of amendment, if not followed by the prostration of every power of the system: consequently, it will require much caution not to be betrayed into error.

However promptly the disease may have been met, even by the most suitable remedies, the disease will, nevertheless, sometimes progress with alarming rapidity. The pain and swelling will so augment, as to leave the woman no choice of position: she finds a trifling mitigation of her sufferings while on her back, with her legs drawn up, that the abdominal muscles may be relaxed. The pulse increases in frequency, but diminishes in force. The respiration becomes difficult; the tongue dry, and brown, or not altered, while the face and extremities are bedewed with a cold, clammy sweat. The face becomes pale, or partially flushed; the countenance haggard, wild, and expressive of the greatest

[1] "When the abdomen subsides, without being preceded by copious stools, and with a dry skin, it threatens the utmost danger."—Denman.

distress. Delirium, vomiting,[1] involuntary discharges of both the fæces and urine, and death.

But before the scene is finally closed, the woman seems to be relieved of a part of her sufferings, by a change taking place in some of the more urgent and painful symptoms. Distention is diminished, or even sometimes entirely removed—the swelling of the abdomen subsides; and pain ceases with more or less suddenness.

The absence of milk in the breasts, and especially if this be attended with an entire indifference to the child, must be looked upon as almost certainly fatal. If joined to these, there be little expression of suffering, a very quick pulse, and considerable swelling; and if the attack has been very early after delivery, the case must be looked upon as almost hopeless. So uniformly is danger increased by the earliness of the attack, that it is noticed, we believe, by every writer upon the subject; therefore, this circumstance should always be kept in view, when an opinion is about to be formed of the degree of danger.

The extent of the abdominal swelling seems to be of more consequence than the degree of soreness or of pain; and when it is excessive, and becomes tympanitic, it is extremely dangerous, nay, almost always fatal. Dr. Clarke says, "It has not occurred in my sphere of observation, to see any recover, in whom the swelling of the belly has been in any very great degree,"[2] p. 133. Also,

That "those who have the disease at later periods after delivery are not attacked with the same violence; the depression of strength is not so great, the tumefaction of the abdomen is less extensive, and the chance of recovery is, consequently, better," p. 133.

Dr. Armstrong observes, that "an excess of sensibility is always to be dreaded; for I have had opportunities of remarking, that those patients seldom recover who are tremblingly alive to every surrounding impression. It is well known, that unmarried women do not recover so well as married ones; the mental irritation, necessarily attendant upon their situation, considerably increasing the febrile excitement, and rendering them extremely restless," p. 26. Dr. Clarke has remarked the same thing.

[1] We have seen more than one instance of puerperal fever terminating in "black vomit," similar to that observed in "yellow fever:" we have also seen the same appearances after rupture of the uterus. Dr. Gordon informs us, that "when there were symptoms of mortification, what the patient vomited was black, and had a strong resemblance to coffee grounds," p. 10. Dr. Armstrong considers it as a highly dangerous symptom, "when there are frequent vomitings of a coffee-coloured fluid," p. 31. Yet gangrene, or mortification, has not been observed in any of the dissections we have read of.

[2] I shall relate a case presently, in which there was great distention of the abdomen, but where the woman recovered. Yet this must be looked upon but as a rare exception to the rule.

"Costiveness is always an unfavourable circumstance," Dr. Armstrong says, "increasing in no inconsiderable degree the difficulty of cure; while an open state of the bowels before delivery tends to mitigate the severity of an early attack, and a diarrhœa coming on afterwards, carries off the disease," p. 30. Dr. Denman says, as already noticed, that a diarrhœa may be critical, and carry off the disease, p. 568.

The signs which may be looked upon as favourable, are—

1st. A diminution of frequency of the pulse, with an increase of its volume.

2d. A reduction of the swelling of the abdomen, with an abatement of pain; provided, the first is gradual, and the latter not sudden; and accompanied by condition first.

3d. Changing posture without suffering inconvenience; but jactitation must not be mistaken for it.

4th. A return of milk to the breasts, attended by solicitude for the child.

5th. A restoration of the lochial discharge after it has been suppressed; especially if it change to a healthful appearance.

6th. The tongue becoming moist; losing its white appearance, and cleaning at the edges; or, if it has been brown and dry, becoming whitish and moist, accompanied by condition first.

7th. If the urine become more abundant, and deposits a lateritious sediment.

8th. If the skin become cooler, and moist throughout its whole extent; especially if attended by conditions first, second, third, fourth and fifth; or if a natural warmth return to the extremities, after having been preternaturally cold, accompanied by the signs just referred to.

9th. "A subsidence of the abdomen after copious stools, and with a moist skin, is a fortunate alteration for the patient." Denman.

10th. "If the pulse can be kept under one hundred and twenty in the minute, for the first twelve days, the patient will generally do well; but if the pulse keep very quick, after the abdominal symptoms have entirely disappeared, affections of the chest,[1] and of the glandular system, or deep-seated suppurations, may be dreaded."[2] Armstrong, p. 32.

[1] "If any disease hath taken its immediate origin, as it were, out of the puerperal fever, and been combined with it, it hath been the peripneumony. I have met with several instances of this kind." Hulme, p. 15.

[2] "Some of those who survived, recovered slowly, and were affected with wandering pains, and paralytic numbness of the limbs, like that of chronic rheu-

Of the Contagious Nature of Puerperal Fever.[1]

Had not the belief that puerperal fever was a contagious disease, and had not this belief a great effect upon the minds of females who are pregnant, or who are in the puerperal state, and consequently may very much influence their happiness, we should not have touched upon this subject; believing, as we do, that the opinion is altogether without foundation, at least in this country.

In Europe, and especially in Great Britain, this, and a number of other diseases, are believed to be contagious; while in this country it only amounts to a fear, and not to a conviction. The disease in question, scarlatina, erysipelas, &c. &c., are in these countries looked upon as possessing the power of propagating themselves by some specific quality of their own.

We shall not attempt any formal refutation of the doctrine of contagion, by exhibiting the arguments on both sides of the question: we shall merely select the opinions of such as had ample opportunities to decide the question, and whose conclusions are adverse to the opinion "that puerperal fever is contagious."

Dr. Hulme, whose experience was ample, and who has written an excellent work upon this disease, says that "the puerperal fever is not an infectious disease, any more than the iliac passion, a pleurisy, a *nephritis*, or an inflammation in any other part of the body." Treatise on Puerperal Fever, p. 164.

Dr. Hull, whose opportunities were equal, perhaps, to any who may have written upon this subject, says, "As far as my observation goes, peritonitis puerperalis is not infectious. I have never seen a case, wherein I had reason to suppose that the effluvia, arising from the patient, produced puerperal fever, or typhus, or any other disease in another person, either directly or indirectly. The disease in question frequently arises where there is not the least foundation for a suspicion that infection has been applied," p. 248.

Mr. Hey appears strongly inclined to the opinion that puerperal fever is not contagious; but seems afraid to decide absolutely upon the question.

In this country, under no circumstance that puerperal fever has appeared hitherto, does it afford the slightest ground for the belief that it is contagious. In this city, so far as we know, it has always shown itself as a sporadic disease; and in this form,

matism. Some had critical abscesses in the muscular part of the body, which were a long time coming to suppuration, and when broke, discharged a sanious ichor." Leake, vol. ii. p. 56.

[1] "By contagion, is understood effluvia, arising directly or indirectly from the human body under particular diseases, and capable of exciting the same disease in other persons to whom it may be applied." Hull, p. 247.

it has never been looked upon as contagious, except by Dr. Armstrong. He says, "The peritonitic fever, when completely formed, is, in kind, though not in degree, as contagious as the epidemic:" in this sentiment he stands alone; not even supported by those who believe in the contagious power of the epidemic. In Northumberland, in this state, (see p. 350,) where it was epidemic, there was no evidence that it was contagious. Dr. Leake says, decidedly, the sporadic puerperal fever is not infectious; and it is only so, when epidemic, under particular circumstances, vol. ii. p. 140.

Now, it would be very extraordinary to declare, for it would obtain no belief, that sporadic small-pox, measles, or hooping-cough, were not contagious; for we must ask, what is the difference between the sporadic form or quality of a disease, and the epidemic form or quality of a disease; except that the latter has *its type* affected by some occult influence in the air, which gives rise, at the same time, to the epidemic prevalence of the disease?

g. *Treatment.*

We have now to consider the most important part of our subject, namely, the treatment. As regards this, much discrepancy must necessarily prevail, as scarcely any two authorities can have viewed the disease under the same aspect, as the disease is so variously modified. In confirmation of this, it is only necessary to refer to the late researches upon this point—we say the late researches, as we believe these to be very much the most to be relied upon. We do not wish, however, to be understood as conveying any oblique censure upon former observation; we only mean, that pathological inquiries are now conducted with much more care and with much more success, than thirty or forty years ago. For improvements in this highly interesting and important study, we are particularly indebted to the French, and especially since the writings of Bichat have made us acquainted with the independent and important rôle that each separate tissue performs. We do not pretend that the same phenomena did not present themselves to former autoptic inquirers—we only declare they were not so well understood and defined. This fact can be very easily proved by a reference to some of the most careful examiners of bodies dead from puerperal fever. Let us take Drs. Leake, Gordon, and, above all, the accurate and faithful Clarke, as illustrative of the position now advanced, and it will be perceived, that no distinction is made between the parenchyma of the uterus or ovaries, and their peritoneal coverings, as seats of disease; for were this membrane inflamed, had it suppurated, or were it gangrenous, the uterus or the ovaries were said to be in

either of these conditions; being altogether ignorant that the peritoneum covering these parts may be in a pathological condition, without implicating the other structures of these organs. Again, pus has been found in various portions of the uterus, when it was cut into: this pus was supposed to be the result of the inflamed parenchyma of this body; for they were not aware this fluid was produced by suppuration of the internal mucous coat of the veins. Again, the uterus was often declared to be in a state of gangrene from puerperal fever; but modern research has proved that this organ may be "softened," (ramollissement,) and this without any particular tendency to putrefaction. And once more, that phlebitis of the uterine veins gives a typhoid character to the accompanying fever, &c., for we could easily extend examples.

Now, it is rendered every way probable that some occult cause may operate to produce a particular tendency in some one tissue or other, to become the seat of the disease: thus, we find in some instances the peritoneum to be the principal seat of disease; and this, upon certain portions of it, (see our history, &c., of this disease,) in other cases, the parenchyma of the uterus is especially attacked; or its veins, or its lymphatics, and perhaps even its nerves; and each variety giving a particular character to the phenomena of the disease—hence, as we have already observed, puerperal fever is considered by Conquest and some of the French writers, as a generic term. See page 347, &c. It must, therefore, be evident, if these observations be correct, that much practical acumen is necessary to the successful treatment of this disease, that the different forms may not be confounded—it is, also, equally evident, that we have much to learn in diagnosis. However, let it be understood, that though puerperal females in this country must necessarily, like those of Europe, be obnoxious to remote causes; yet that here such causes, be they what they may, tend more frequently to the production of a pure inflammatory condition of the peritoneum, than the same causes do in other portions of the globe. We say more frequently, for this does not appear to be the case uniformly—for, in the late instances in the Pennsylvania Hospital, we believe that all who were attacked died, notwithstanding the most prompt and active antiphlogistic means were pursued. In these cases it must be evident that some local but inscrutable cause operated, as no such condition of liability was observed in private practice.

From these statements, it will be understood that no one mode of treatment can be applicable to every epidemic visitation of puerperal fever, or even every sporadic case; and, with a view to establish this point more firmly, we shall give the experience of Professor Desormeaux and his pupil, M. Tonnellé, upon this point, though we are, at the same time, persuaded that, in this

country, and in private practice, the disease is almost uniformly highly inflammatory.

From the views entertained by Desormeaux of this disease, he was led to adopt several different modes of treatment, the result of which he has given, together with the successes, and this at several seasons of the year; for this gentleman found, that a mode of treatment which may have been successful at one period, might not prove so at another. Among the more active remedies he used, we may reckon general bleeding, leeching, ipecacuanha, emetics, salivation: the auxiliary means were, warm hip-bath, laxatives, enemata, bark, cataplasms, and emollient washes for the uterus.

The contradictory means, as laid down by authors, for the cure of this disease, induced M. Desormeaux to give fair trial to such as came recommended by good authority; and, not to remain satisfied by either success or failure, he tried the same means at different seasons of the year. General blood-letting was often found highly useful as the initial remedy, as it was found imperiously demanded by the violent action of the system, in cases that he judged to be purely inflammatory; but, for the most part, this benefit was limited to the early stage of these cases, as it failed to subdue the local inflammation, and was often of questionable utility, as this first stage so quickly ran its course. On this account, local bleeding was resorted to, to overcome the local affection of the uterus and its appendages—forty or fifty leeches were applied to the abdomen, and these followed by a hip-bath, or poultice, and this was sometimes repeated two or three times in thirty-six or eight and forty hours. When this plan proved successful, it was speedily followed by a copious perspiration. But the good effects of this method were confined to the early stage, and previous to suppuration. He estimates the rate of success in the following manner. Of 165 cases treated by general and local blood-letting, three-fourths recovered.

Ipecacuanha, as an emetic, he states, was only used in the early stage: this was sometimes successful, and at other times not, depending upon seasons, as he supposes. However, of forty cases treated by it, four-fifths recovered. This remedy was not useful after the suppurative stage had taken place; nor was it found to answer in the typhoid type of this disease. For the suppurative stage, or the typhoid variety of this disease, MM. Desormeaux and Tonnellé think they have found an important remedy in mercurial salivation; for, though by far the greater number of such cases must prove fatal, still, if salivation increases the number that get well, it must be looked upon as a valuable therapeutic means; and perhaps we should have the more confidence in this plan, since the inveterate prejudices of the French against the use of mercury, would not permit them

to employ it, without having derived advantage from it in their trials. We have directed attention to this remedy, (see page 414, on mercurial frictions.) Mercury was only used in the advanced stage of inflammatory puerperal fever, or in typhoid cases, or where neither blood-letting, or leeching, or ipecacuanha would be useful. It was used in form of ointment—two ounces were rubbed in every twenty-four hours—the abdomen and thighs were the parts selected. The auxiliary remedies mentioned above were thought to be useful, especially emollient injections, once in six hours. This mode of treating any one disease is too exclusive to be absolutely relied on; as the successful cases may not have been such from the peculiar treatment, but from their want of intensity; and therefore might have yielded to either plan adopted by Desormeaux and Tonnellé, while the unsuccessful instances may have proved such from their overwhelming violence, or from delay, rather than from the particular treatment being inefficient. It is necessary to the establishment of any exclusive mode, that all the patients should be as nearly as possible in the same condition, when the plan is first put in execution. Therefore, any plan may be either only more or less useful, or otherwise quo ad hoc.

Most of the errors on the subject of puerperal fever have arisen from a want of the necessary discrimination between the stages of this disease, and to an ignorance that the peculiarity of the subsequent ones are entirely dependent upon, or only the necessary and inevitable consequences of, the first stage.[1] Few have so far shut their eyes against the facts revealed by dissections, as not to admit that its first stage is that of high inflammation. But, as this inflammation runs its course rapidly, and is succeeded either by a gangrenous tendency, or an effusion of large quantities of serum in the cavity of the abdomen, and as the body, quickly after death, manifests a strong disposition to decomposition, it was thought by many, that the disease, from its commencement, had a strong septic tendency; and remedies were employed to guard against the consequences, rather than for the removal of the cause; namely, the first or inflammatory stage.[2]

[1] Dr. Armstrong, Facts and Observations, &c., p. 60, says, "The first stage" of Puerperal Fever, "is marked by highly inflammatory, the second, by highly typhoid characters; and it has always appeared to me, that the tendency to putridity in the latter was proportionate to the degree of inflammation in the former."

Dr. Denman says, "When the fever has remained for a very few days, the putrid symptoms, which are usually according to the *degree of the preceding inflammation*, advance very rapidly." We repeat these observations, because of their unquestionable truth, and practical value.

[2] "I cannot help suspecting," says Dr. Armstrong, "that some distinguished authors, having formed their opinion from the appearance of the disease, and the ill effects of venesection, at this period, (the gangrenous,) have thus been persuaded that debility is the principal thing to be counteracted from the beginning,

To prove this, let the treatment and the result of the plans of Denman, Gordon, Hey, Armstrong, and even Leake, be contrasted with the mistaken practice of Clarke, and some others. In the practice of the first of these gentlemen, recoveries were common; in that of the latter, very few escaped. Dr. Clarke informs us, that three out of four died, p. 132. The patients under his care were treated, from the beginning, with large doses of bark, and such other remedies "as have a tendency to support the strength, and diminish the irritability."

It may be said, that, in the epidemic described by Dr. Clarke, there was but little evidence of inflammation, and much of "putridity;" but this should not be too hastily assumed, as we have attempted to prove at p. 360. Nor can an inference be drawn in favour of his pathological views from the success of his practice. The public are much indebted to Dr. Denman for the candid renunciation of his errors upon this subject. In the early part of his practice, he entertained great doubts of the propriety of blood-letting in puerperal fever: he thought it weakened the patient, without lessening the disease; and for a long time, he informs us, he did not take away blood in any quantity.

The influence of this highly cultivated and respectable practitioner was so great as to give tone to public opinion; his mode of practice and his views were extensively adopted by the British practitioners; and they became almost the standard for the treatment of puerperal fever. Fortunately for the fate of hundreds, a more extended experience, and more correct notions of the nature of the disease, led him to renounce, with much magnanimity, the errors of his early life. Therefore, so soon as he was convinced of the insufficiency or total inefficacy of his plan, he gave it up with a candour which all must admire, though few may imitate it. He says, in the last edition of his works, as edited by Dr. Francis, p. 576—

"I am now convinced, by manifold experience, that my reasoning was fallacious, and my fears groundless; and that what I had considered as proofs of insufficiency or impropriety, of bleeding, in the true inflammatory puerperal fever, ought in reality to have been attributed to the neglect of performing it in an effectual manner, at the very beginning of the disease. In short, if the first stage be permitted to pass unheeded, bleeding will then certainly be injurious, the opportunity having been lost; and the physician called in afterwards, however great his talents may be, will too often have the mortification of being the spectator of

and during the whole course of the fever. Be this as it may, the stimulant treatment is at once the most delusive and dangerous which can be adopted; and it is much to be lamented that it has the weight and authority of some eminent names." —Facts and Observations, p. 63.

mischief which he cannot then remedy, and an event which he can only deplore."

We are told, that it is of the utmost consequence to the cure of this disease, that we distinguish between the true inflammatory and the putrid puerperal fever. This would be most true and important, did such a difference really exist as is here intimated; but the distinction attempted has been based, we believe, upon the violence of the complaint at different times, and under different circumstances, rather than upon any essential difference in the absolute nature and seat of the diseases. See note to p. 369.

Thus the sporadic puerperal fever is more easily subdued, and will bear bleeding even at a later period than the epidemic puerperal fever; because the former is less rapid in its course, owing to the accompanying inflammation being less exalted; and not to the latter being of a putrid character; for when this state exists, we must repeat it, it is owing to the inflammation being so transcendent, that the parts must die, if not speedily relieved.

And though the system, under such circumstances, cannot bear, perhaps, the abstraction of blood, yet it cannot support the action of stimuli. We are persuaded there are few errors in practice greater than that founded on the belief that when a *disease will not bear depletion with profit, that it then absolutely requires the opposite treatment;* and we are sure it has been the death of thousands.

The supposed tendency to typhus in fevers of every description, when the patient has become weak, and especially if the tongue has become brown or dry, has led unhappily to the use of tonic and stimulating remedies, by far too many practitioners; for were the results of such treatment faithfully recorded, we are convinced there would be but little evidence in its favour—indeed, so confident are we on this subject, that we never fail to consider the *cures* of such a state of fever by this method, but as *escapes.*

Let us illustrate the position we have assumed, by taking part of cases IX. p. 89, and XXVII. p. 206, as related by Mr. Hey. On the tenth day of this patient's disease, it is said, "She had had no sleep in the night, and was very restless, with some degree of delirium. We found her incessantly talking, but could procure no answer from her to any question that was proposed. She refused all medicine. Pulse one hundred and twenty.

"In the course of the day, the abdomen became tumid, from flatus confined in the bowels: the tumefaction was unattended by pain or soreness, and entirely subsided as soon as evacuations were procured by an injection.

"Ten, P. M. she was in all respects worse. Her urine came away involuntarily; she had some rattling in her breathing, and appeared to be sinking. Pulse one hundred and thirty-two.

Thirty drops spt. æther. sulph. were ordered to be given now and then as a grateful cordial.

"29th, (eleventh day of illness,) we were agreeably surprised to find our patient much better. During the night she had been able to retain her urine, and had made a large quantity with proper intervals. She was quite sensible, and more composed; and had regained the power of putting out her tongue, which before she had lost. Pulse one hundred and six, and the tongue continued clear. Ordered to take, at regular intervals, a *draught of infus. rosæ, made with decoct. cinchonæ, and to have occasionally Madeira wine.*

"These favourable symptoms did not long continue. In the evening the pulse got up to one hundred and twenty, and the heat had increased.

"From this time the patient became gradually weaker, her pulse was accelerated more and more, and her urine was again discharged involuntarily. She lived two days in a state of great anxiety and increased restlessness, and died on Sunday night, the 1st of July," that is, on the 15th day of the disease.

On this case, so far as we have related, we shall offer a few remarks: on the eleventh day of this patient's illness she was found to be surprisingly improved; all the favourable circumstances, which usually announced the decline, or almost absence of the disease, were present. She was able to retain her urine, and which she made abundantly and properly, after its having passed from her involuntarily; she was sensible, after having been incoherent and stupid; her tongue became clean, and her pulse was reduced from a hundred and thirty-two to a hundred and six. She had regained the power of putting out her tongue, "which before she had lost."

The day previously to this amendment she was extremely ill, as above stated; she was then ordered the spt. æther. sulph. in small but repeated quantities. Now, is it not evident that the amendment of this patient was owing to her being only very moderately stimulated by the æther? a stimulus at the moment, in point of power, exactly suited to the condition of the system; and had the physicians been contented to "let doing well alone," it is probable she would have recovered. But, over-anxious for their patient, they must prescribe several stimuli at once; namely, bark, wine, &c., and thus undo in a moment all they have so happily achieved by their previous moderation; for Mr. Hey informs us, that "these favourable symptoms did not continue long." In this case the system was evidently over-stimulated, and the patient succumbed; for, had a free use of opium been made, it would, we think, have been the congenial stimulant, for this article never acts more favourably than in peritoneal inflammation after ample depletion. Indeed in many other inflammations, we have seen

its salutary influence when the other diffusible stimuli would have proved most probably injurious.

It may be said that these favourable appearances now and then take place, yet disappoint the hopes they have created—this may be the case in the early stage of the disease; but when these changes take place so late as the 11th day, we should be disposed to look upon them as announcing a return to health; and had this amendment been properly cherished, it might have terminated in it; especially as the pulse was so much reduced in frequency as to be at a hundred and six in a minute.

Case XXVII. united, on the 8th and 9th days, as many bad symptoms as are generally recorded upon such occasions; that is, "the pulse became more frequent, and the patient appeared more sunk. The abdomen remained much tumefied, but manifested but little sensibility upon pressure. She still complained chiefly of the pain in her head."

On the 10th day, says Mr. Hey, "I accompanied the surgeon in the evening to visit his patient. She appeared very low, and her pulse was frequent and feeble. Her tongue was *dry and brown, and her teeth were incrusted with sordes.* Her head was yet affected with pain, but she made but little complaint of her belly. It was, however, enlarged, and though not very tender, was sensible to pressure. The symptoms of active inflammation having given place to those of a typhoid character, the purgatives had been omitted, and the evacuations had consequently decreased. I recommended such a repetition of the purgative as might procure an evacuation about once in four hours, and a continuation of the saline mixture in a state of effervescence. The strength of the patient was supported by a light, but nutritious diet, such as broths, jellies, chocolate, and milk.

This plan was regularly pursued for four days, and the patient was then convalescent.

This case is full of valuable instruction in the treatment of this disease, and indeed of every other, where there is what is termed a "tendency to typhus." It must be observed, that on the tenth day of the disease, there was what Mr. Hey himself considered a "typhoid character: the tongue was dry and brown, and there was great weakness." Yet, notwithstanding these evidences, he did not, as in the former case, goad the system to dissolution, by bark, wine, and other stimuli; on the contrary, he gave the system an opportunity of righting itself, by the abstraction of offensive matters from the bowels; and though he says he had omitted the purgatives, he yet "contrived to have a stool once in four hours."

Now, will any dreader of *typhus* permit his patient to have six stools per diem, or give the neutral mixture by way of *cordial?* Certainly he will not—he will put bark, wine, ammonia,

&c., &c., in immediate requisition; and be rewarded for his anxiety and exertions by the loss of his patient. There is not the smallest doubt upon my mind, that Mr. Hey would have lost the patient last mentioned, as certainly as he did the other, had he had recourse to the same remedies.[1]

It is truly a matter of surprise, that Dr. Leake did not profit more by his experience in the fever of the "Westminster lying-in Hospital;" and by the freer use of the lancet, have saved most probably more patients than his account of cases now exhibits. We have thought proper to make a scale of these cases, to show that the disease he had to encounter was comparatively a mild one, and would most probably have yielded in almost every instance to a more liberal plan of depletion. Dr. Leake had certainly a correct notion of the nature of the disease; as his dissections displayed to him in every instance the ravages of previous inflammation. Why his hand was withheld from the lancet, it is impossible to say; for had he examined the result of his own practice he must have perceived that the only instances of recovery, (at least of those he has recorded,) were those in which bleeding and purging, to a greater or less extent, were employed; and not a single instance of recovery when it was not employed. We have the histories of eighteen cases, the terminations of which were as follow, viz.:—

Cases I. II. VII. VIII.[2] IX. XII. XV. XVI., were bled and purged, and recovered.

IV.	Bled ℥viij. on or about the seventh day, . .	died.
V.	Bled ℥vj. on the third day, ...	died.
XI.	Bled ℥vij. on the third day, ...	died.
VI. VIII. X. XIII. XIV. XVII. XVIII.[3]	not bled, .	died.

This little schedule speaks volumes as to the comparative modes of treatment. Out of the eleven patients which were bled, eight recovered; and of the three who died, it may be truly said, the bleeding could not be expected to have been successful,—for it was employed both sparingly and late. Case IV. was seen by Dr. Hunter in private practice; and he thought from the nature of the symptoms, it would be giving a chance to extract blood on the seventh or eighth day. This circumstance shows

[1] We are not informed, however, by Mr. Hey, of the motives which induced him not to employ the common routine of stimuli for his patient; but this is of no consequence as regards the event, as it establishes the principle insisted on; namely, that though a patient may not bear the loss of blood, or sustain other evacuations to the extent they had previously been employed, yet that she will bear them to a certain extent; and that she will sink under the action of stimuli, when urged beyond a very moderate degree.

[2] It may be proper to notice that case VIII. is not case VIII. in Dr. Leake's series: it is included under the history of case VII.

[3] This case, like case VIII. mentioned above, is also recorded in the history of case VII. See Treatise on Child-bed Fever, Vol. II.

the comparative mildness of the disease as it then appeared; and Dr. Leake informs us, p. 57, that "when the disease proved mortal, the patient generally died on the tenth or eleventh day from the attack; consequently it should be looked upon as one of a mild type."

In the epidemic so well described and so successfully treated at Leeds by Mr. Hey, the success was still greater, though the disease was of much greater malignity. For we are informed by Mr. Hey, that "it was by no means uncommon for the fever at Leeds to finish its course in forty-eight hours: and in many cases, it proved fatal in a much shorter time," p. 165. Yet, the success following the plan pursued by Mr. Hey was considerably greater than that which attended Dr. Leake, in a much milder form of the disease; and this success was owing to a bolder practice, and one better adapted to the nature of the complaint.

Mr. Hey states that "of fourteen patients treated without bleeding, only three recovered," p. 165. And farther, that after "I had determined to use bleeding in addition to purging, of thirty-three patients whom we (he and his father) attended, only three died; the last twenty-six having recovered in uninterrupted succession;" to this he adds, in a note, copious bleeding was used in all these cases except one, which was rather slight, and was cured by purging alone, p. 168.

At Sunderland, where the disease was, perhaps, rather less malignant than at Leeds, Dr. Armstrong says, "Those patients who were copiously bled and purged, and vomited successively, were usually convalescent on the fourth or fifth day, and from that time regained their health and strength rapidly," p. 73.

He says, "Of forty-three distinctly marked cases of puerperal fever, only five cases of the whole number terminated fatally.—The thirty-eight successful cases were all treated by copious depletions of one kind or another, and in twenty-nine of them calomel was exhibited in doses of a scruple, or half-drachm, at the beginning, and occasionally repeated in the course of the distemper," p. 70.

Dr. Gordon, whose method of treating puerperal fever consists in large bleeding early in the disease, and plentifully purging, with the interposition of opiates, informs us that in a fair trial of his method in fifty cases, only five died. And farther, that all the five died before he had discovered, by the dissection of his fourth case, the true method of treating the disease; and that of thirty patients treated in this way, not one died.

It is evident, from all that can be collected from the history of puerperal fever, and all that is revealed by numerous dissections, that this disease consists of an inflammation of some one portion of the peritoneum, and is not necessarily confined to any one

viscus.[1] But this inflammation may be more or less extensive; it may be more or less violent; and it may run its course with greater or less rapidity, as its type may chance to be. But, be it in extent unlimited or confined; be its mildness or violence what it may; be its course rapid or slow, it nevertheless consists of inflammation of very important and influential structures of the human body; and requires for its extinction extensive blood-lettings; sometimes less than at others, but always liberal purging, with a most strict antiphlogistic regimen. This being premised, we shall go on to say a few words on each of the most usual remedial agents, as employed by the best authorities, and most experienced practitioners in this complaint.

1. *Bleeding.*

This remedy was first extensively employed by Dr. Gordon for the cure of the epidemic puerperal fever which appeared at Aberdeen in the year 1789, and continued in that place, with more or less violence, until 1792. Soon after the appearance of this disease, he discovered that early and large bleeding, with very liberal purging, was almost sure to cure this complaint; but, that the first remedy could not be advantageously used after a certain period had elapsed; consequently, its efficacy was confined to that stage of the disease which consists in an active inflammation. If bleeding were performed after this active stage had passed, it was either ineffectual or injurious; and on this account it is proper, in a pathological, as well as in a therapeutical view, that we should ascertain the causes which render a different plan of treatment necessary, as the disease progresses; for this purpose, we shall divide its progress into three stages, each of which requires a certain modification of treatment.

a. *Stage First.*

Dr. Armstrong makes but two stages of puerperal fever: but we are of opinion that a third is essential to the well-understanding of the disease. We are certain that an intermediate state, or stage, takes place in puerperal fever, between the cessation of the inflammatory stage and the period of effusion; and may be termed the "gangrenous stage,"[2] since it is at a time in which

[1] See pages 347-8.

[2] We are by no means satisfied with the term employed to designate the state of the parts at this period of the disease: we use it, then, with a full conviction that it does not express the idea which we would wish to convey. It is a state of a part which approaches death, but it is not death; because parts sometimes recover from it. If properly managed, that is, if not over-stimulated, the powers

the vessels have not absolutely lost their life, though they are on the very verge of it. It is at this period that blood-letting can do no good, and stimulants will destroy. We shall have occasion to describe the stage more fully hereafter.

The third stage is that at which effusion takes place, and at which all remedies are, as a general rule, unavailing.

Dr. Armstrong describes the first in the following manner:—

"The first stage is variable as to its duration,[1] sometimes terminating in a little more than twenty, and sometimes continuing as long as seventy hours, but always being shorter in the epidemical than in the peritonitic fever."[2]

It will be seen, at once, from the histories already given of this disease, that the duration of this stage must vary, not only as the disease may be sporadic, but also when it is epidemic, owing to the type which occult causes may impose upon it. In a practical point of view, therefore, the limit of this stage must not be rigidly fixed by any certain number of hours. This stage, strictly speaking, consists in the duration of the active state of inflammation; and this will vary, as just observed, from the contingencies of season, constitution, age, epidemical influence, &c. In the epidemic described by Dr. Leake, this stage continued, in a number of instances, much longer than the greatest limit proposed by Dr. Armstrong; for, in a case in which Dr. Hunter was consulted, (case IV.) he advised bleeding on the eighth day.[3]

It would be of great importance, in the treatment of this disease, were there certain, or infallible signs, which would characterize this stage. But, unfortunately, none such exist, with which

of the system may be such as to recover the part from the condition in which over action had placed it.

[1] It must be borne in mind that Dr. Armstrong is deducing his stages from a particular epidemic; and, consequently, that the duration of them will only apply with strictness to that especial puerperal fever; or, rather, as the puerperal fever exhibited itself at that time and place.

[2] By the "peritonitic fever," we presume Dr. A. means the sporadic puerperal fever: as every body seems to agree that the latter is less violent in its symptoms, and less rapid in its course, than when this disease prevails as an epidemic. If this be not his meaning, we are certainly at a loss for it; since he has declared, in the initial paragraph of his preface, that "under the common term puerperal fever, are comprehended both the ordinary peritoneal inflammation, and the 'low malignant fever of lying-in-women,' as these are considered as modifications of the same disease." Preface, p. 1.

[3] We may also refer with advantage, as regards the treatment of this disease, to Mr. Hey's twenty-seventh case. In this case, he bled with much advantage, for the first time, on the fifth day; repeated it on the evening of that day, and on the day following; yet Dr. Armstrong says he "never dared to recommend blood-letting when the disease had continued longer than thirty hours," p. 76. This declaration of Dr. Armstrong is an additional proof of how much importance it would be to have other marks, than the number of hours which may elapse, to judge of the continuance, or cessation, of the first stage of puerperal fever; for it must be recollected, as before observed, that the fever at Leeds was rather more malignant than that of Aberdeen.

we are acquainted; at least, none with so much certainty as to remove all doubt. Under such circumstances, we are obliged to rely upon symptoms; though pretty strongly marked, yet must not be looked upon as unerring.

The pulse, which, in most other inflammations, so faithfully directs us, here deserts us; at least, we cannot judge of it in puerperal fever, as in pleurisy, or common fevers; as this disease imposes a character upon it, which, with our present notions, would greatly mislead us.

Mr. Hey says, "The state of the pulse affords little information, either as to the propriety of bleeding, or the quantity of blood proper to be taken away; and if we are deterred either by the apparent weakness of the patient, by the feebleness and frequency of the pulse, or *by any other symptom*, from bleeding copiously, we shall generally fail to cure the disease," p. 161.

This statement clearly shows that neither Mr. Hey, nor those who have preceded him, were in possession of any sign by which they could, with absolute certainty, determine the existence or termination of the first stage of this disease. The pulse, the common, and, generally, the certain guide in other febrile affections, we are warned not to rely upon, for it will deceive us; on what, then, are we to rely? Mr. Hey says, "If the disease is clearly ascertained, no other consideration is of much importance," p. 161. This assertion is not made with Mr. Hey's usual caution and discrimination; for puerperal fever is still puerperal fever throughout its stages; yet Mr. Hey is particular, in other places, that the treatment of one stage should not be pursued in another.

We are willing to admit that "the state of the pulse affords little information," in our present state of knowledge of that function; but we cannot be persuaded but that every active morbid condition of the system, has a modifying influence upon the heart and arteries; and which could be detected, were our powers of discrimination equal to the necessity and usefulness of such a knowledge. In the disease in question, a disease of such deadly tendency, and rapid termination, the importance of the structure which is its seat, the decided control it has over some of the powers or actions of the heart and arteries, would lead us almost necessarily to conclude, that the mode of action of these important viscera is peculiar, and every way highly characteristic in puerperal fever, did we but possess the *tact* to detect it.

We would, therefore, earnestly caution the practitioner against being betrayed into an indifference about the state and character of the pulse, that the assertion of Mr. Hey would almost certainly lead to; and, on the contrary, would decidedly recommend to him the study of the pulse, and other signs in puerperal fever, with a hope that the secret characters of peritoneal inflammation,

in its various grades, may be detected; and thus confer upon society a never-ending benefit.

For, that there are *characters of pulse* in puerperal fever, (we must repeat,) we are persuaded; and, that they are susceptible of development, we as confidently believe; but to detect them with a certainty that may be useful, will perhaps require much experience and patient application, together with a most nice and discriminating touch. This faculty, (the touch,) like all our other faculties, may be much improved by well-directed discipline; its powers should, therefore, be carefully cultivated by the physician who is desirous of extending the benefits of his profession to his fellow creatures. For, it is but by repeated trials and careful observation, that the faculty of discrimination can exist in an accurate or an exalted degree; and when it does not exist in such a degree, it cannot serve the purposes so much desired.

Farther, the touch, like the other faculties, exists in various degrees of perfection, as an original condition; consequently, it is not, in every instance, susceptible of the same cultivation: but in all it is capable of much improvement; or at least with very few exceptions. We would, therefore, earnestly recommend the attempt. As illustrative of this point, and some others connected with the pulse, we think we cannot do better than to employ the language of Mr. Hunter upon this subject.

"The pulse is often as strong a sign of the state of the constitution as any other action that takes place in it, though it is not so always; but, as the pulse has but one circumstance attending it that we can really measure, all the others being referrible to the sensation or feeling of the person who is the judge of it, the true state of the pulse is not easily ascertained. The knowledge of the soft, the hard, and the thrill, are such as can only be acquired with accuracy by the habit of feeling pulses in these different states, and, by many, is not to be attained; for simple sensation in the minds of any two men is seldom alike.

"The late Dr. Hunter was a striking instance of this, for, though he was extremely accurate in most things, he could never feel that nice distinction in the pulse that many others did, and was ready to suspect more nicety of discrimination than can really be found. Frequency of pulsation in a given time is measurable by instrument; smartness or quickness in the stroke, with a pause, is measurable by the touch; but the nicer peculiarities in the pulse are only sensations in the mind. I think I have been certain of the pulse having a disagreeable jar in it, when others did not perceive it; when they were only sensible of its frequency and strength: and it is, perhaps, this jar that is the specific distinction between constitutional disease or irritation and health. Frequency of pulsation may often arise from stimulus, but the

stroke will then be soft; yet softness is not be depended on as a mark of health: it is often a sign of dissolution; but then there must be other attending symptoms." Treatise on the Blood, Am. ed. p. 265.

From what has been said, it is evident that the touch is more or less perfect in its condition, as an original sense; and that it is capable of much improvement in its powers of discrimination; and from what follows, it will be found there is much to learn of the various conditions of the pulse, as depending upon the nature, seat, and force of disease; and that the opinion, that the state of the heart and arteries, if duly distinguished, may lead to the knowledge of the condition or state of morbid action, in any particular structure of the body, is not altogether chimerical. To prove this, we shall continue our quotation from that high authority, Mr. Hunter.

"In the consideration of the peculiarities of the pulse, it is always necessary to observe, that there are two powers always acting to produce them, the heart and the arteries; that one part of the pulse belongs to the heart alone, another to the arteries alone, and a third is a compound of both. But the action of the heart and arteries do not always correspond; the heart may be in a state of irritation, and act quickly in its systole, while the arteries may be acting slowly; for the heart must be considered as local, while the vessels must be considered universal, or even constitutional. The stroke, which is the pulse, with the number of them that are made in a given time, whence the pulse is commonly called quick or slow, their regularity or irregularity, as to time, and the quickness of the stroke itself, belongs to the heart. The quickness of the heart's action often takes place, though the pulsations are not frequent, which gives a kind of rest or halt to the artery, or pulse, especially if the pulse be not frequent. The hardness, the vibratory thrill, the slowness of the systole, with the fulness and smallness of the pulse, belong to the arteries. As the pulse arises from the solids, or the machine, *its state will be of course according to the nature of the machine at the time; and is, therefore, capable of being, in either of these states, natural and diseased.*

"In most diseases of the constitution, whether originating from it, or arising in consequence of diseases of parts, where the constitution becomes affected by sympathy, the pulse is altered from a natural to a diseased state, the degree of which will be regulated by those affections. *This alteration is commonly so constant, and so regularly of the nature of the disease, that it is* one of the first modes of intelligence we have recourse to, in our inquiries into its nature: but alone it is not always a certain guide."

"The varieties which the pulse admits of are several. It is increased in its number of strokes, or it is diminished. It is re-

gular, or it is irregular, as to time in its stroke; it is quick in its stroke, or diastole, and slow in its systole. It is hard in its diastole, and it vibrates in its systole.

"In most cases, probably where the constitution is in a state of irritation, the pulse will be quick and frequent in its number of strokes in a given time, and the artery will become hard, from a constant or spasmodic contraction of its muscular coats, so as to give the feel of hardness to the touch; besides which, the diastole of the artery is not regularly uniform and smooth, but proceeds by a vast number of stops, and interruptions, which are so quick as to give the feel of vibration, or what we could express a thrill." Ib.

These quotations are sufficient to prove that the condition of the artery in disease, as regards its volume, its firmness, its softness, its frequency, or its peculiarities of action, very much depends upon the nature of the disease which imposes the alteration; and that the diseased action itself will be influenced by the particular structure or structures which are the seat of it. If this be true, and we can see no reasonable doubt of it, it seems to follow, that the peritoneum, in a state of inflammation, will give to the heart and arteries a character of action which exclusively belongs to that condition of this membrane; and that the actions of the artery will of course vary with the varying condition of the part or parts inflamed.

As regards ourselves, we profess to have much reliance upon the pulse in all acute affections of the body; and almost always make it the guide of our prescriptions; yet we confess we have less dependence upon it in puerperal fever, than in any other disease with which we are acquainted. Not, perhaps, because it is unfaithful in its reports of the condition of the system, but because, we fear, we do not exactly understand them. The study of the pulse, therefore, in puerperal fever is almost a new one; and we most earnestly recommend it to those who may almost constantly have the charge of females, with a firm conviction that they will be amply repaid for their labours.[1] But to return. We would ask, what is the evidence that the first stage has run its course? This is an important question; and one, from our present data, that cannot, we fear, be answered satisfactorily. Hitherto this condition of the disease has been inferred, rather than ascertained. It has been inferred, from the little advantage in some cases, and the marked injury in others, of blood-letting; and this is probably the amount of information upon the subject;

[1] Mr. Travers says that the pulse of *real* fever does not exceed a certain limit, and that consists with a property of distinctness. When it is innumerable, and from that cause indistinct, it ceases to be fever; it is a powerless automatic action, and has neither the characteristics of heat of surface nor obstruction of the general secretory system.

hence, perhaps, the rule for withholding the lancet in certain epidemical puerperal fevers, being regulated by hours; for it would seem, that in each individual epidemic of this nature, there is a period, cæteris paribus, at which the first stage runs its course, and this period has been signified by hours, because, when the disease had continued beyond this time, and blood-letting resorted to, it either proved unavailing or mischievous; consequently, the first stage was supposed to be past.

Thus, Dr. Gordon would not promise success from bleeding, if the disease had continued from twelve to twenty hours; because this was probably the average period for the first stage, in the Aberdeen epidemic; and Dr. Armstrong says he has "never dared to recommend it when the disease had continued longer than thirty hours," p. 76; because in the Sunderland epidemic, this may have been the period for the change from the first to the second stage, &c.

It is true that Dr. Armstrong has attempted the character of the first stage, by detailing certain symptoms, and has perhaps succeeded better than any one else in defining and ascertaining its bounds; nevertheless, he must not be considered as being altogether successful. It is, however, a praiseworthy attempt; and he is entitled to the thanks of the profession, for the lucid manner in which he has treated the subject.

"In the first stage," he says, "after the rigours have ceased, the pulse is hardly ever less than one hundred and twenty, and sometimes, though, as far as I have observed, very seldom, as high as one hundred and forty in a minute: the blood does not seem to flow in a soft, easy, and natural current, but comes against the finger with a kind of vibratory motion, and more than ordinary pressure is commonly required to stop its course along the artery, which feels rather hard and tense. The skin is dry, and hotter than natural; the patient complains of great pain and soreness of the abdomen, breathes nearly forty times in the minute, vomits mucus and bile, is generally bound in the belly, has a white, dry tongue, considerable thirst, and labours under all the restlessness and irritation of fever," p. 59.

This description looks as if it were every way competent to the purposes for which it is designed; yet there is not a symptom, well defined as it seems to be, that may not accompany the second stage, if we except, perhaps, "rigour," which must be looked upon, when it takes place, as the initial symptom of the constitutional affection, and is of short duration.[1]

The pulse is said to be from one hundred and twenty to one

[1] Dr. Armstrong, however, includes chills in his second stage: to have made these characteristics, he should have added, that these chills are not followed immediately by a sense of increased heat.

hundred and forty strokes in a minute; so it happens in some instances of the second stage; and Dr. Gordon says he has bled in some cases with good effect, when the pulse has been one hundred and sixty; therefore, if the bleeding with advantage be the proof of the presence of the first stage, the second cannot be characterized by a pulse of one hundred and forty; since one hundred and sixty have been witnessed during the first stage. In Mr. Hey's case, (3d,) the pulse is recorded to be at between one hundred and thirty and one hundred and forty on the fifth day, and at a time when all hope was abandoned; and it was but one hundred and forty-four, (a number considerably within the range at which Dr. Gordon says he has bled profitably,) a short time before death. Mr. Hey's case, (5th,) terminated fatally in thirty-five hours; and its commencement "was accompanied with a full, strong pulse." In his sixth case, the pulse was one hundred and thirty in the last stage. We might furnish many more cases of similar import; but these are sufficient to prove that the number of pulsations of the artery in a given time will neither mark the first, nor characterize the second, stage of this disease.

We should place much more reliance on that peculiarity of the pulse which Dr. Armstrong describes, "where the blood does not seem to flow in a soft, easy, natural current," &c.; if it were found to be a constant symptom, and to be detected with certainty by even close attention, as it seems to countenance the opinion hinted above, that the inflammatory stage most probably is accompanied by a distinctive arterial action, however evanescent it may be in duration, or however difficult of detection.

The state of the skin is very much less characteristic than even the pulse; for in the first stage it is frequently moist, nay, wet; and in the second, it is both hot and dry. The pain and soreness of the abdomen often continue through the whole disease; and though never absent from the first stage, it is nevertheless constantly present in the second. The breathing is not more decisive; vomiting is less frequent in the first than in the second stage. The tongue affords no criterion; it remains sometimes as described above, until death closes the scene. Thirst is sometimes insatiable in the last stage; and the restlessness and irritation from fever attend sometimes to the last moment.

We should, however, place some reliance upon the character of the pain and soreness, mentioned as belonging to the first stage: it is generally of an acute, pungent kind; more easily excited by pressure at one portion of the abdomen than another; and very frequently confined to the hypogastrium: there may be some swelling from the very commencement, which is sure to augment as the disease gains ground, giving to the hand the sensation of more or less solidity; but the distention is never excessive during this stage; is obedient to the influence of remedies,

by diminishing in size and sensibility; provided, the remedies exert a control over the disease generally. The patient is sometimes disposed, and sometimes does, turn upon her side; though obviously inclined to maintain her position, for the most part, upon her back; because the abdominal muscles, by being relaxed, moderate pain.

It would appear, then, that the first or inflammatory stage of puerperal fever, the stage in which bleeding has been so eminently successful, has no *discovered character* by which it can be distinguished from the second, in which this operation is forbidden after the lapse of a few hours. This circumstance we must regard as unfortunate, but perhaps not without remedy: for we must still insist that there cannot be such a departure from the usual economy of the system, as to make puerperal fever the only exception. We must be borne with, therefore, if we still persist in recommending to physicians a more exclusive devotion to and study of the several stages of this disease, that their now hidden characters may be developed.

The rules which are to govern the loss of blood in this complaint are therefore necessarily reduced to rather uncertain and narrow limits; and are more dependent upon contingencies than fixed principles. These rules are comprised in the following directions:—

1. Bleed as early in the disease as possible. But,
2. Bleed, at that time, as much as the system will well bear.
3. Repeat, pro re nata.

1st. Every practitioner is aware of the difficulty which almost constantly attends the execution of the first direction: this arises from several causes; but none of which are absolutely insurmountable. First; to the initial symptoms of the disease being frequently mistaken for the common occurrences of child-bed—if chill attend, as is most common, or if fever ensue without it, it is commonly attributed to the "coming of the milk," or that ephemeral called the "weed;" or to some slight exposure, or unforeseen negligence. Second, to the desire on the part of the nurse to be thought competent to any little indisposition incident to this period of child-bed. Third, to the consequence of this belief of the nurse; losing thereby much time in witnessing the effects of her own remedies. Fourth, to the fear of censure attaching to the nurse for any indisposition by which her patient may be attacked; therefore withholding early information. Fifth; to an ignorance of the nature and fatal tendency of the disease. Sixth, if pain commence early, to its being mistaken for after-pains.

For the reasons just assigned, it will, in very many cases, be out of the physician's power to treat the disease as early, or as vigorously, as its ferocity demands; therefore he should prevent, as far as possible, the operation of the above causes, whenever

the necessity may exist, by following the plan adopted by Mr. Hey, during the prevalence of the puerperal fever at Leeds. He requested to be sent for "without delay, on the accession of shivering or unusual pain." But he adds, "Notwithstanding my urgent request, I was seldom called until some hours after the attack," p. 76. This declaration diminishes our hopes of early applications, it is true; but the plan should be tried, as it is the only one we can adopt for the end proposed.

We have already mentioned the latest periods, in the opinions of several of the best authorities on this subject, at which it would be useful or proper to bleed; we also attempted to show that these directions were founded upon experience, or rather experiment, upon different occasions; that, though there were discrepancies in appearance in these statements, yet there were none in reality; as the conclusions were drawn from individual experience, in each of the epidemics of which they gave the histories, and, consequently, that neither the short periods of Armstrong and Gordon, nor the more extended ones of Denman and Hey, should be taken for absolute guides.

Therefore, in every instance of puerperal fever, especially in epidemic, as well as in sporadic cases, there may be a difference of period at which it might be proper to bleed; and that this period should be discovered as early as possible, and its limits ascertained with as much precision as it is susceptible of. For, by this means, we may extend the benefits of this operation beyond what might at first be expected, as well as be prevented from doing mischief by it, if too lately employed.

As regards, then, the period after the attack at which we are to draw blood, it is a concurrent opinion, the earlier, most decidedly the better: as respects the one at which this would no longer be useful, we have but very uncertain marks; therefore, much must be left to the experience and judgment of the practitioner who may have the care of the case.

2. Having ascertained the propriety of blood-letting in the early period of the disease, the questions next in importance are first, what quantity must be drawn; and secondly, must it be repeated, and when, or under what circumstances?

All the writers who have treated this disease with adequate boldness, prescribe the loss of a given quantity of blood; thus, Gordon, Hey, and Armstrong, limit it from twenty to thirty ounces; believing that less will not answer, and more is not generally required.[1] In this country we are not in the habit of regu-

[1] Dr. Armstrong says, "The quantity of blood drawn at once in puerperal fever should seldom be less than twenty-four, and, perhaps, never more than thirty ounces," p. 76.

Dr. Gordon says, "I have limited the quantity of blood necessary to be taken away, and fixed the time when taking away that quantity will cure. Thus, I found that twenty-four ounces of blood, taken away at one bleeding, within six or

lating our bleedings by ounces; in severe illnesses we almost altogether regulate the quantity by its effects; and we are disposed to believe this to be the safer and the more efficient plan. For it is not to be supposed that every constitution will be affected precisely alike; nor that the disease, in every constitution, will yield to exactly the same force of remedies. In one instance, perhaps, a less quantity than twenty or thirty ounces might be sufficient, while another might require a much larger quantity; therefore, in the one more blood may be drawn than is absolutely necessary, (though we confess it to be erring on the safer side,) and in the other, which is much more material, an inadequate quantity is too confidently relied upon.

As regards our own practice, in such cases, we have always abstracted as much as the system would well bear; that is, until the pulse was changed, pain abated, fever diminished, and there was a disposition to syncope. These alterations would take place sometimes from the loss of a smaller, and sometimes a larger quantity of blood: but until these did take place, we could not flatter ourselves that we had *strangled*, or, perhaps, even weakened, the disease; but this we always attempted, did it require only twenty ounces, or did it demand forty.

In constitutions wont to faint from the loss of a little blood, we cannot always get at one bleeding the necessary quantity; the operation is, therefore, to be repeated so soon as the system reacts with decided force; unless all the expected relief be obtained by that which has already been done. We do not wait for the lapse of any certain number of hours to repeat the bleeding; for we are persuaded, in doing so, we permit the disease to gain ground; we should, therefore, draw it as quickly as the state of reaction will permit, if the symptoms continue.

Dr. Armstrong says, "If the patient, as sometimes happens, faint under the first operation, when only four or five ounces of blood have been taken away, unless there be an abatement of all the urgent symptoms, another vein ought to be opened, after the lapse of one or two hours, and about twenty ounces taken in a full stream," p. 78.

We would ask, why we should "wait an hour or two" in this case, before we repeat the bleeding? The answer may be, because there is "an abatement of all the urgent symptoms:" this, we admit, will almost certainly be the case during the temporary prostration of the system, but no longer, in some instances; as

eight hours after the attack of the disease, together with a single purgative, never failed, at once, to cure the puerperal fever," p. 84. On this, Mr. Hey makes the following remarks: "Though I have found great advantage from the rules laid down by Dr. Gordon, yet it is incumbent upon me to say, that they were not always infallible, either as to the quantity of blood which was necessary for the cure, or the time within which it should be taken," p. 156.

there is commonly a renewal of all the more violent symptoms the moment reaction is re-established; therefore the period of reaction should be the rule. For, in some remarkable cases, this state of fainting may continue beyond the period prescribed, when it would be highly injudicious to repeat the bleeding; while in others, reaction may take place in a few minutes: in such a case, it would be losing precious time to wait "an hour or two" for the second bleeding; and in the other we might draw blood at an improper moment. Besides, the rule we have laid down is void of all ambiguity.

3d. The necessity for farther bleeding must be determined by the existence and urgency of the original symptoms; such as fever, with accelerated pulse; vomiting; heat; and pain without much swelling. Indeed, as far as our experience will warrant the deduction, the state of the abdominal swelling, and the degree of acute pain without much distention of the abdomen, are much more certain marks of the continuance of active inflammation, or the first stage, than any others we are acquainted with; and that it is much safer to rely upon them than upon the pulse; because the various conditions of the latter are but very ill understood. So far these circumstances have directed us, and, we may add, successfully. We have already declared, however, that our experience has not been extensive.[1]

Our rule hitherto has been, when the first bleeding, which, as we have observed, we always make a very liberal one if called to the disease early, does not abate the severity of the symptoms in three or four hours, to repeat it without hesitation: but not to the extent of the first, as evidences of its influence manifest themselves before an equal quantity is drawn. Nor do we limit it to this single repetition; for, if the disease be not abated in severity, we know of no other general remedy that has the slightest control over it. And we are persuaded that the farther abstraction of blood is necessary, either from the arm, or locally, by leeches.

It is, however, to be understood, that purging is to be immediately commenced after the first bleeding, and persevered in, as we shall direct more particularly presently.

Mr. Hey's rule is, "If the pain and soreness of the abdomen are not removed, or very materially alleviated, *in six hours*, the bleeding ought to be repeated; nor should a considerable degree of faintness, or even deliquium, make us suppose that farther bleeding is either unsafe or unnecessary. In short, I know not, from any experience of my own, that scarcely any other limit should be put to the quantity of blood, than the removal, or con-

[1] The reader will readily understand the reason of this, by what has already been said of the rare appearance of this disease in this city.

siderable diminution of the pain; provided all that is requisite be drawn within twelve hours of the first evacuation," p. 161.

We think the plan just mentioned a very good one; though we should prefer making the interval rather shorter, provided the symptoms continue to be urgent; for we are well persuaded nothing is gained by delay, unless there be an abatement of the symptoms; and we believe that this should be the rule upon most occasions. The temporary amendment procured by the bleeding must not be mistaken for such a reduction of the disease as to render the repetition unnecessary; for, if there be a renewal of all the distressing symptoms, the disease must be considered as being still in full force, though the rapidity of its march may be a little abated by what has already been done.

We must object to an entire conformity with Mr. Hey's proviso, namely, that "all the blood designed to be drawn should be within twelve hours of the first evacuation;" for we are persuaded we have seen bleeding do much good after a much longer period, where the force of the disease has been abated by the preceding evacuations. For it is but reasonable to suppose, even in the puerperal fever, which runs its course rapidly, that the tendency to disorganization will be diminished by proper remedies; therefore, a greater latitude, as regards hours, we think, may be permitted, provided the symptoms do not display the same intensity, yet evidently remain unsubdued.

Dr. Armstrong discovers still greater apprehension of repeating the bleeding. He says, "The quantity of blood drawn at once in puerperal fever, should seldom be less than twenty-four ounces; but a repetition of venesection ought, if possible, to be avoided, though occasionally it may be absolutely necessary; and when this is the case, there should be as short an interval as possible between the first and second bleeding," p. 76. Why this direction should be guarded by the condition, "absolutely necessary," we cannot say, as we presume, in such cases, when employed, it is always absolutely necessary.

We are very desirous, on practical points, not to mislead, by attaching too much importance to any mode or plan we may have adopted for the cure of a disease, when, in our own opinion, that plan has not been sufficiently tested by experience. On this account, we feel that we are not in possession of any infallible marks, by which we can distinguish the two early stages of this disease from each other better than those who have preceded us. We can, therefore, only give a detail of such circumstances as have hitherto directed us in the treatment of the disease in question, and have led us to suppose we were generally correct.

We believe that puerperal fever consists in a most active inflammation of the peritoneum; and that this inflammation, if left

to itself, or timidly encountered, or if aggravated by improper treatment, will run its first stage with great rapidity. That its second stage consists in the termination of the previous inflammatory stage, in that state known by the term "gangrene;" which is always of short duration; for it either retraces its steps to inflammation, or resolution, or terminates in profuse effusions within the cavity of the abdomen. That the only chance of recovery arises from the immediate extinction of the inflammation by resolution; and that, when this is not effected, death will almost inevitably ensue; for, unless the inflammatory stage can be cured, the attempt for the relief of the others is altogether contingent; as all experience, or with extremely rare exceptions, is much against favourable results from any mode of treatment hitherto pursued.

We have thought it safe and necessary to bleed in puerperal fever, as long as the pulse possessed any firmness; the abdomen great tenderness and acuteness of feeling, or severe occasional pain; provided the distention was not great; and while the mammæ secreted milk, or they retained a certain degree of fulness, and especially, if the woman exhibit the feelings of a mother towards her child. We have not always chosen to draw the blood by the lancet; we have sometimes preferred the employment of leeches, and the quantity drawn by them to be regulated by ounces, and not by the number of leeches.[1]

We desist from abstracting blood in any way, when we believe our second stage is about to take place, or has actually occurred. This stage Dr. Armstrong has very well characterized in general; we shall therefore repeat it, and make such observations as we think the case requires.

"In the second stage, the pulse is never under one hundred and forty, and frequently rises above one hundred and sixty in the minute, while it is always exceedingly variable, weak, and compressible; the tenderness of the belly is usually much diminished, and the fulness increased; cold partial perspirations first break out about the face, neck, and extremities; the centre of the body, particularly the surface of the abdomen, remaining dry, and of a pungent heat, for some time afterwards. The patient rarely shivers much, but has repeated chills; vomits dark, gru-

[1] The size of the leech in this country not only varies very much, but also is very small when compared with the European leeches. But the leechers here soon become acquainted with the capacities of these animals, and will very accurately determine, by an average, the quantity of blood they will abstract. As a general rule, however, eight American leeches will be required to draw an ounce of blood, so that the calculation is easily made. These animals should be applied to the abdomen generally, but a greater number should be placed upon the most painful portions of it, or they may be placed with advantage upon the inner surface of the thighs.

mous matter; seldom breathes less than sixty times in a minute; has generally a loose belly, a brown, black, or reddish parched tongue; unquenchable thirst, tremulous hands, lightness and swimming in the head, confusion of thought, or delirium: and several hours before death a remarkably relaxed, cold, damp skin," p. 59.

In this account, Dr. Armstrong has confounded the "gangrenous stage" with the "stage of effusion;" some of the symptoms belonging to the one are blended with those belonging to the other, which, for the sake of precision, should be separated, as the stages are not equally desperate; for the gangrenous may admit of remedy, or at least is not absolutely fatal. It is, however, a stage necessarily replete with danger, though it may not always eventuate in death, unless goaded to it by a mistaken theory, or a false pathology. It is the stage in which bleeding can never be proper; and the one in which stimulants must be forbidden. It is the one in which we must always rely upon the powers of the system; and, consequently, from which we must not look for many recoveries, though we may have a right to expect now and then an escape.

We will presently attempt to separate the symptoms which in our opinion mark these two stages.

2. *Of Purging.*

Nothing can be said in favour of this remedy in this disease: mild aperients may be occasionally useful.

3. *Of Emetics.*

In favour of emetics in puerperal fever, agreeably to a plan suggested by M. Doulcet, there is the most extraordinary testimony ever presented to the public. In 1782 the King of France directed "the Royal Medical Society of Paris" to make a report upon the memoir of this gentleman, containing "a new method of treating puerperal fever." This report declares that "puerperal fever had made its appearance more frequently than ever in the Hotel Dieu of Paris, since the year 1774; and that it had always proved fatal to every person it attacked. They farther report, that in four months, during which this epidemic disease raged with great fury, nearly two hundred women were saved to society by Doulcet's new method of treatment."—Clarke's Essays, p. 106.

M. Doulcet's method of cure "consists in taking the advan-

tage of the moment of attack, and giving, without losing an instant of time, fifteen grains of ipecacuanha, in two doses, at the distance of an hour and a half from each other, and repeating them again the next day, in the same manner, whether the violence of the symptoms be abated or not; and if the disease should continue much the same, they are repeated again the third, and even the fourth day, according as the case may require. In the intervals between the doses the effect of the ipecacuanha is kept up by a potion composed of two ounces of oil of sweet almonds, one ounce of syrup of marsh mallows, and two grains of Kermes' mineral. The common drink is linseed tea, or an infusion of Scorzonera root, edulcorated with syrup of althæa; and towards the seventh or eighth day of the disease, the patient takes a mild purgative, which is repeated three or four times, according to the exigency of the case. The efficacy of this method of cure consists wholly in its early application, namely, in the moment when the disease first commences; and though experience has since taught us that the loss of a few hours is not always irreparable, yet it seldom happens that ipecacuanha has the same complete success, when the first moment of attack is lost."—Whitehead's Translation of Doulcet's Method, &c., as quoted by Hull; Treatise on Phleg. Dol., p. 267. See M. Desormeaux's Account, p. 417.

The simplicity of M. Doulcet's plan has much to recommend it; and if its efficacy had been equal in other places, and in other epidemical puerperal fevers, as it was in that of the Hotel Dieu, it would be irresistible. But, unfortunately for the interests of humanity, the success of this plan has been very much confined to the hands of its inventor. In the early part of our practice, we adopted this plan in two or three instances, but it failed altogether; neither of the patients having survived the fifth day. And Dr. Clarke says, "A repetition of vomits on the plan suggested by M. Doulcet, has been attended with obvious disadvantage.—The agitation of vomiting, by the necessary pressure made on the contents of the cavity during their operation, has always aggravated the pain, and tends farther to exhaust the powers of the woman, already sufficiently reduced." Essays, p. 161.

This accords precisely with what was observed in the use of emetics, in the few cases in which we exhibited them. And this consequence can always be deduced, when the vomiting is an attendant on puerperal fever; we have never known either the spontaneous or provoked puking produce a favourable change in the disease, though we have occasionally witnessed temporary relief, when bile or other offensive substances have been thrown from the stomach.

It may be asked how it has happened that emetics in the hands of M. Doulcet should have been invariably successful, and

fail so constantly in the hands of others? This question it would be difficult perhaps to answer satisfactorily; but we may suggest that it might have depended altogether upon some peculiarity of the epidemic itself, but of which peculiarity we have no knowledge. It was certainly of less rapid course than those of Aberdeen or Leeds; for the seventh or eighth day is mentioned, as if it were a common period to arrive; and also, that they found by experience that the loss of a few hours was not irreparable; the very reverse of the two epidemics just named. It seems to have borne a strong resemblance to that which attacked the "Westminster lying-in Hospital," and of which we have an account by Dr. Leake.

The occasional use of emetics is recommended by Dr. Denman, who seems to be convinced of their utility; yet it would appear that the benefit procured by them was but temporary, and entirely dependent upon the condition of the stomach. For he says, "If a sickness, loathing of stomach, or offensive taste in the mouth attend the commencement of the disease, this medicine, (the antimonial powder,) never fails to occasion vomiting, and the patient, with a countenance strongly expressive of the benefit she has received, will attest the advantage of the method pursued." But it must be remarked that Dr. D. in no instance relies upon this method exclusively; for he says, "At the same time that we avail ourselves of the advantage of the antimonial powder, we must not neglect the use of those means which contribute to procure immediate ease or relief to the patient." Introd. p. 281.

From what has just been said, we must not be led into the belief, that the nausea and bad taste in the mouth are always indicative of the oppressed state of the stomach, and that this condition would be relieved by puking; for we must, in such cases, be careful to distinguish between the sickness, occasional vomiting, and disgust, which may arise from something offensive in the stomach, and the vomiting, &c., which is really sometimes a symptom of the disease. The first rarely occurs but in the very commencement of the disease, while the other only appears from one to several days after.

The vomiting which really belongs to the disease is seldom accompanied by the discharge of crudities from the stomach; it merely procures the discharge of mucus and the drinks taken down a short time before. This vomiting arises, either from the stomach sympathizing with the inflamed peritoneum at a distance from it, or from its own covering being the seat of it; both of which, when this happens, constitute a part of the disease, and, of course, can only be aggravated by the use of emetics.

Dr. Armstrong is decidedly in favour of emetics: he says, "In

addition to bleeding and purging, Mr. Gregson was induced, from an accidental circumstance, to prescribe antimonial emetics, and on repeated trials, fully proved them to be excellent auxiliaries, never using them, however, till the patient had been freely bled and purged; and this is certainly the best way of administering them in puerperal fever. Three very severe cases which I attended were treated by blood-letting, purging, and vomiting, successively employed in less than twelve hours, and the united influence of these remedies was certainly very striking, a complete change having been brought about in the circulatory system, and almost every symptom of inflammation and fever entirely subdued," p. 68. Mr. Gregson, in his communication to Dr. Armstrong, says, "My attention was particularly turned to the usefulness of emetics, from an accidental occurrence in a case in which purgative medicines had been given to a considerable extent, without completely relieving the pain and tenderness of the abdomen; which, however, were soon removed by free vomiting, occasioned by a large dose of calomel and jalap. And, from that period, I have repeatedly used antimonials, with the intention of exciting nausea or vomiting, when bleeding and purging, or when purging, alone, had been premised," p. 113. Yet, it appears to us, from all we can learn, that emetics are of doubtful efficacy as principal remedies; and we are scarcely disposed to look upon them as useful auxiliaries.

4. *Blisters.*

Considerable diversity of opinion exists with regard to the propriety of applying blisters in puerperal fever. Dr. Clarke thinks them inconvenient, and of very doubtful efficacy, if not injurious. Dr. Armstrong is of opinion they may be useful, if applied before the second stage commences; but confesses that since he had bled and purged so freely, that he had rarely found it necessary to employ them. Mr. Hey considers them inconvenient; and that they will seldom be necessary; but has thought them useful if applied before the last stage. See Chap. on Inflammation of the Uterus.

Our own opinion is, that they are less useful in this inflammation than in any other: we have used them formerly, but have abandoned them altogether of late years; because they are always extremely inconvenient, where the patient is to be so frequently disturbed by the operation of purgative medicine, and never, as far as we have seen, decidedly useful. If they are employed, it should be after the first or second liberal bleeding, and after the bowels have been well purged, and the inside of the thighs should be their seat.

5. *Fomentations.*

Many are in the habit of employing warm fomentations to the abdomen; Mr. Hey recommends them as soothing, and as free from mischief. We have for many years ceased to employ them, for the following reasons: first, they are oppressive from their weight, and offensive from the vapour which arises from them; secondly, they expose the woman to injury from her bed becoming wet, against which no care can guard; thirdly, they oppress from their heat, and appear always to increase the frequency of the pulse; fourthly, we have never seen them of the smallest benefit. Bladders, partially filled with warm water, are the best mode of applying fomentations, if they be insisted on.

6. *Spirit of Turpentine.*

Were we to pass this substance unnoticed, it might be looked upon as an important omission. The character it has obtained with many respectable physicians will always justify a trial; but we are sorry to say that so far, in our hands, we have not had sufficient reason to rely solely upon it; though as an auxiliary, in two or three recent instances, we thought it highly useful.

We confess ourselves, however, to have laboured under prejudices, or rather apprehensions of its effects in the beginning of the disease, or as a substitute for bleeding and purging, as recommended by Dr. Brenan. As we are not familiar with its use, or acquainted from experience with either the proper moment for its employment, or the proper quantity to be exhibited under varying circumstances, it appears, at present, at least, a doubtful remedy; yet we would not wish to be understood, by this declaration, as doubting the veracity, or impugning the motives, of those who have borne unqualified testimony to its control over this disease.

Our want of extensive experience in this remedy will only permit us to say that it appears to be only proper at the termination of the first stage; here it may be useful; but here we have forbidden stimulants. But is this substance to be ranked under the same head with wine, brandy, opium, volatile alkali, &c.? We think not, for it appears to be a stimulus of peculiar powers, as we see in burns, &c. Were we to suggest then a trial of the sp. tereb., it would be at the period just designated, and in combination with castor oil; thereby forming one of the most certain

and peculiar cathartics we know. It might deserve a trial at this period.[1]

7. *Mercurial Frictions.*

This remedy has lately been proposed for puerperal fever; and M. Velpeau has given in "Revue Médicale," for January, 1827, several very interesting cases, in which was employed, and apparently with advantage, mercurial frictions upon the abdomen. But he very honestly confesses his experience to be insufficient, at the time he wrote his essay, to determine the precise degree of confidence to be placed upon his plan; yet he appears pretty strongly inclined to attach considerable importance to it. His mode of using this remedy is—

First, To have the whole abdomen smeared with from two to four drachms of the unguent, every two, three, or four hours.

Secondly, If the pain and swelling of the abdomen, and especially if the mouth betray any mark of the influence of the mercury upon it, to diminish the quantity to one or two drachms, and to make the intervals of application longer.[2]

Thirdly, to wash off, with warm water and soap, or with sweet oil, the crust which the ointment forms upon the skin, that

[1] The following case has occurred to us since the period of the above remarks. May 10th, 1830, 5 o'clock, P. M. Was called to visit Mrs. L., in consultation with Drs. Zorn, Perkin, and Shaeffer. Mrs. L. was safely delivered two days previously, though considerable hemorrhage succeeded. Soon after the abatement of the flooding, she was attacked with severe pain in the abdomen, followed by great distention and tenderness, great distress of stomach and vomiting, &c., which continued with unabated violence up to the moment of my first visit. She was at this moment vomiting violently, and discharging very large quantities of a dark green-coloured fluid, and quadruple or more than the quantity drank. Her pulse very small, and so frequent as scarcely to be counted; extremities cold, and her whole body covered with cold sweat; breathing laborious; her abdomen enormously distended, and extremely sore to the touch. We retired, and I really looked upon the case as utterly beyond the reach of remedy. But as it was very proper to make some effort for the relief of the patient, it was agreed that twenty or thirty drops of the spirit of turpentine should be given every hour, and the whole of the abdomen covered with ung. hydrargyr. fort. without regard to weight. As the case was so utterly forlorn, an appointment for meeting was not formally made—another consultation was left to the contingency of her surviving the night. 11th, I was agreeably surprised by a request to meet the above named gentlemen at 9 o'clock, A. M. We found our patient much relieved of every enumerated symptom—the remedies were continued, and her amendment under it so rapid, that I withdrew from the consultation on the fourth day from my first visit. In a short time after I was informed by Dr. Perkin that Mrs. L. was entirely recovered. In this case the turpentine appeared to have a most decided control over the disease—it was probably aided, however, by the mercurial ointment. In another case, soon after this, however, the turpentine and mercurial ointment failed, though the case was neither so rapid in its progress nor so violent in its symptoms, for the patient continued until the seventh day.

[2] In neither of the cases in which we used the mercurial ointment were the salivary glands affected in the slightest degree.

in its future application it may be more certainly placed in contact with the skin.

Fourthly, To continue the ointment, if circumstances warrant it, (that is, if the patient live long enough, or if her system be obedient to its influence,) until either signs of salivation show themselves, or until such amendment take place, as shall render farther perseverance unnecessary.

A very interesting case of puerperal fever has lately presented itself, in which the mercurial ointment was very liberally used; but I should be very unwilling to decide upon the extent of the agency it had in the recovery of the patient, as another celebrated remedy was employed simultaneously with it; namely, the spirit of turpentine.

I was requested by Dr. Mitchell to visit Mrs. ——, who was very ill with puerperal fever. This patient had been delivered safely by the Dr. of her first child, and nothing alarming presented itself until the second day. Milk had been freely secreted, and there was every promise of a good "getting up," until the beginning of the third. At this time she was attacked with a pretty severe chill, which was followed by great heat, thirst, tenderness of the abdomen, and a very frequent pulse.

She was bled, purged, leeched, and blistered on the abdomen, and kept upon a strict antiphlogistic regimen, &c., before I saw her. There was such an appearance of amendment for two or three days after this time, that scarcely a fear was felt but that she would surmount her disease; but the expectations so fondly indulged in in the morning, were entirely destroyed in the evening, by finding our patient with a cold, clammy skin; a pulse scarcely to be numbered, very small, nay, almost extinct; breathing short, very frequent, and rather laborious; the alæ nasi expanding and contracting with great frequency; the stomach rejecting every thing offered to it; the lips dark and dry; the milk entirely gone; slight mental alienation, though not amounting to delirium; the abdomen excessively distended and tympanitic; the feet and legs cold; extreme fœtor of the lochia, which were small in quantity, and very dark; in a word, so certainly did we look upon her being in articulo mortis, that no appointment was made for a visit next morning.

Notwithstanding, however, these unfavourable appearances, Dr. M. and myself thought it a duty to do every thing that lay in our power—accordingly, thirty drops of the spirit of turpentine were ordered to be given every hour: an ounce of strong mercurial ointment was directed to be rubbed on the abdomen during the night, sinapisms were ordered to the feet and legs, and an enema of sixty drops of laudanum and a gill of warm water was to be thrown up the rectum.

The next morning Dr. M. favoured me with a call, as had been

agreed upon the evening before, provided he found the patient alive. And I honestly confess, I was much surprised when he reported our patient to be rather better than we had left her in the evening. Upon visiting her, this was found to be the case. The skin and extremities were warm; the pulse more expanded, and considerably less frequent; her breathing more natural; the countenance more composed; the mind more upon the alert; the vomiting and nausea greatly subsided; the abdomen rather less tender. The ointment was to be continued, as well as the turpentine: of the latter she complained, as creating a disagreeable heat in the stomach. To remedy this, a tea-spoonful of sweet oil was directed to follow, in fifteen minutes, each dose of the turpentine, which effectually removed this inconvenience.

Barley water and very thin sago were directed as drink and nourishment; also the juice of sweet oranges, which proved very refreshing. The remedies were ordered to be continued in the evening. On the morning following there was so much amendment that the turpentine was discontinued: the pulse was still too frequent, but the abdomen was less swelled, much softened, and very much less tender. The ointment, however, was again applied. From this time she improved hourly, and had eventually a rapid convalescence.

During the whole treatment, it may be proper to observe, that a solution of gum Arabic was her chief food and drink; and that at no time were internal stimulants, if we except the turpentine, for an instant employed.

I have since been informed by Dr. M., that four or five days after I had taken my leave of this patient, that upon her complaining of some pain in her bowels, the nurse, (a new one,) gave her some brandy to relieve it: this immediately exasperated the pain, and re-excited fever. She was under the necessity of losing twelve ounces of blood, and to be purged, which soon relieved the pain and fever: she recovered soon after this without farther interruption.

It may be as important, as it is interesting, to state, that after an entire cessation of the milk for two weeks, it was restored, and continues sufficient to nourish the child: this was effected by the persevering application of the child to the breast.

b. *The gangrenous Stage.*[1]

We believe that from the moment that the pulse increases in frequency, from one hundred and twenty, to one hundred and

[1] "Gangrene may be considered as a partial death; the death of one part of the body, while the other parts retain their natural powers." Sir Astley Cooper's Lectures, Am. Ed. p. 98.

The state of a part here described is not precisely what we would wish to be

forty, the system is verging towards the second, or gangrenous stage. At this time the pulse not only increases in frequency, but also abates in force, and even perhaps in volume. Hiccough now takes place, with more or less violence. The mammæ lose their milk entirely, and become more flaccid. Vomiting of the drinks, almost as soon as swallowed, sometimes takes place. The tenderness of the abdomen is diminished; and the character of the pain changes from the acute to the obtuse; the swelling is increased in the belly, and an approach to tympanitis may be perceived by striking against its sides. The urine is extremely high-coloured, offensive in smell, and very scanty in quantity. If there be lochia, they are offensive and very dark. A lividity commences on the cheek and lips. The mouth is dark-coloured, and parched; the tongue is generally, but not necessarily, dry and rough; but when so, it requires several efforts to thrust it beyond the teeth; and when placed thus, it is either not retracted until the patient is bidden to do so, or is withdrawn very slowly and reluctantly. The teeth are covered with a mahogany-coloured scruff, and the gums nearly livid. The skin is dry and husky. The respiration hurried, and rather laborious; but not so frequent as the last stage, though much more so than the first.

A tendency to delirium, or a manifest forgetfulness of the immediately preceding events; a total indifference to the child and the surrounding circumstances. Complains but little; and, if interrogated, answers vaguely, or contradictorily. The pulse is rapid and rather indistinct; and the wrists colder than the other portions of the arms. This stage is very evanescent; rarely continuing more than twelve hours, though it may, perhaps, be protracted a little longer by proper remedies; or be shortened by improper ones.

It is this stage which receives the name of typhus; it is at this time that the nature of the remedies is changed by most practitioners; and it is at this period that this change usually seals the fate of the patient.

The management of this stage should be reduced to one of

understood, when we describe "the gangrenous state of puerperal fever," therefore, we would wish to employ precisely the definition which Galen gave of gangrene: which is that state or condition "when a part, from violent inflammation, is *not absolutely dead*, but is *about to die*." Huger's Inaugural Dis. on Gangrene and Mortification, p. 6.

Dr. Armstrong says that "medical writers have justly made a distinction between gangrene and sphacelus; the circulation, animal heat, and sensibility remaining in the first, but not in the last; the one being the threatened, the other the actual, death of the part." Morbid Anatomy, p. 78.

In this state of a part, the previous action or inflammation exceeds the powers of the part to sustain that action; and, consequently, there exists a great disproportion between the action and the power. Now, it must be evident in such a case, that the only relief that can be expected, is from a reduction of the action to the state of the power, as we shall state more fully presently.

great simplicity and inertness, by withholding all stimuli; but continuing a gentle depletion from the bowels.[1] Diarrhœa sometimes comes on at this stage, and occasionally proves critical, if it be not arrested upon false principles, by astringents. The system sometimes rights itself, when it is not opposed by officiousness or overweening anxiety; or is not overturned by stimulation. Has any one seen a recovery from this stage, when bark, wine, opium, ammonia, &c., have been employed? We believe few can answer this question in the affirmative. Even under the management of the judicious Hey, we have reason to believe, in one or two instances, he but hastened the fate of his patients. See cases IX., XXVII. Dr. Armstrong, though he does not appear to recognise the exact condition of the system at this period, was nevertheless perfectly aware of the injurious tendency of cordials, or of stimulants.

The views of Mr. Hunter, on the subject of inflammation and its consequences, are truly valuable, and every way in point, as regards our present subject. He says, "I consider inflammation as an increased action of that power which a part naturally possesses; and in healthy inflammations, at least, it is probably attended with an increase of power; but in inflammations which terminate in mortification, there is no increase of power, but, on the contrary, a diminution of it. This, when joined to an increased action, becomes a cause of mortification, by destroying the balance which ought to subsist between the action and the power of every part. If this account of mortification arising from no specific nature be just, we shall find it no difficult matter to establish a rational mode of cure; but, before we do this, let us take a view of the treatment which has hitherto been recommended, and see how far it agrees with our theory. It is plain, from the common practice, that the weakness has been attended to; but it is also plain that the increased action has been overlooked; and, therefore, the whole aim has been to increase the action, in order to remove the weakness.

"The Peruvian bark, confectio cardiaca, serpentaria, &c., have been given in as large quantities as the case appeared to require or the constitution could bear; by which means an artificial or temporary appearance of strength has been produced,

[1] Maintaining the depletion of the bowels is in strict conformity to the theory adopted of this complaint—for the augmented secretion from the mucous surface of the bowels acts like topical depletion, as it must necessarily diminish the contents of the vessels concerned in the inflammation, and thus permit them to contract; and by contracting, they acquire an increase of power, and, at the same time, suffer a diminution of action; because one of the unnatural stimuli is, in part, withdrawn; namely, that of distention. Mr. Hunter says, that "many circumstances in life, as also many applications to parts, will call forth the contraction of the vessels: we are, therefore, to apply such means; and whatever will do this without irritation, will so far counteract the effects."—Treatise on the Blood, Am. Ed. p. 279.

while it was only an increased action. Cordials and wine, upon the principle on which they have been given, are rationally administered; but there are strong reasons for not recommending them, arising from the general effect which they possess, of increasing the action, without giving real strength. The powers of the body are, by this treatment, sunk afterwards in the same proportion as they had been raised, by which nothing can be gained, but a great deal may be lost; for, in all cases, if the powers are allowed to sink below a certain point, they are irrecoverable."—Introd. to Treatise on the Blood, p. 20.

Dr. Armstrong also states, p. 63, "The stimulant treatment, (in the second stage,) is, at once, the most delusive and dangerous which can be adopted, and it is much to be lamented that it has the weight and authority of some eminent names." Again, p. 81, he observes, that "the system is uncommonly susceptible of stimulants, such as strong wine and cordials in the second stage, and, if freely administered, they generally destroy the patient, whose remaining powers are best supported by milk, nourishing broths, and the like."

He also appears well acquainted with the propriety, nay, the necessity, of continuing the discharges from the bowels. He says, "Speaking from my own personal observation, I do not know the period of the disease in which cathartics can be omitted without considerable hazard; they are indispensable in the first stage, and I have seen them occasionally succeed when the disorder seemed advanced into the second,"[1] p. 80.

Mr. Hey says, "If these means, (evacuants,) fail to cure the disease, from being employed either too late, or in an improper manner, grateful cordials may be given in its latter stages to alleviate the distressing feelings of the patient; but cordials or tonics can afford no other advantage," p. 166. As we cannot appreciate exactly the powers of the system, when under disease, however desperate that disease may be, is it not improper, from any motive of humanity, to give that which cannot relieve, but which may injure by interrupting the powers of the system, in an attempt at restoration? In the stage we are now considering, the patient's safety depends upon "doing" (almost) "nothing." Light vegetable jellies, acidulated by the sulphuric acid; gum Arabic in solution, acidulated; rennet-whey; cream of rice. Strong coffee is often very grateful, and sits well upon the sto-

[1] It must, however, be understood, that purging must not be carried on to the same extent as in the more active stage of the disease; for, if carried too far, it may irritate the bowels too severely, and thus increase the debility. Mr. Hey's plan, of an evacuation every few hours, is perhaps rather excessive; we should prefer a less to a greater number, and for the reasons before stated; a less number would seem every way sufficient for the removal of offensive matters in the intestines, besides occasioning a competent increase of serous secretion.

mach, and may be administered freely, especially if vomiting be troublesome. We cannot agree with Dr. Armstrong, and Mr. Hey, in the use of broths, or any other animal substance; for, in our opinion, they should always be excluded from the room of the puerperal patient. In the early stage they are too stimulating; and in the second, too soon become decomposed in the bowels, and add to the existing mischief. Drinks may be given freely, and may be made to convey sufficient nourishment; but they must have in them no stimulating ingredient whatever. Saline draughts in a state of effervescence, Mr. Hey says, are refreshing; they may, therefore, be given; the sweet spirit of nitre, also, makes an agreeable beverage.

Under some of the most unfavourable conditions of the system in this disease, there have occasionally been recoveries; such are the cases of Dr. Gordon, after effusion, and others, perhaps, whose exact histories we are not acquainted with. The restorative powers of the system in some instances are great; and they are occasionally exerted successfully, under circumstances where no reasoning upon the subject could for a moment justify a hope; thus, women have recovered after rupture of the uterus, &c. But in all these cases, nature was freed as much as possible from as many of the retarding causes as it well could be, and left to manage the injury in her own way. So, in the disease under consideration, were nature left undisturbed to the exercise of her powers, we should, perhaps, have more instances of recovery.

The system sometimes recovers itself from this gangrenous state of fever by means of its own, when it is not stimulated to unnecessary, or rather to deadly, exertion; but after a manner which can neither be foreseen nor imitated. Thus, we have seen recoveries from yellow fever, after black vomit and hemorrhages from almost every part of the body; but in all these instances, little was done towards *aiding nature;* she was permitted to do her work in her own way.

Yet there are instances in which the system can be much assisted, even in desperate cases, when the indications are obvious, and of easy execution; as the following case will prove:—

A young man, of strong constitution, was attacked with a bilious remittent fever, which, after fourteen days, took on the form of typhus, as it was called; and for which, bark, wine and blisters were employed. On the seventeenth day of the disease, I was called on to visit him. I found the patient with a quick, irregular, and tense pulse; and the sores occasioned by the blisters, quite livid. The bark and wine were omitted; the patient was bled and purged; and all applications to the blistered parts were forbidden. The following day he was better; but his pulse

continuing tense, he was again bled, and purged with calomel and jalap. He continued to mend; the livid look of the blistered parts was converted into one of high inflammation. He was bled once more: the fever left him a few days after; the sores healed kindly, and he was soon perfectly well. Here, from a state of most violent action, by removing the irritating cause, and lowering the system, the action of the parts retrograde, first to that of active inflammation, and then to that degree of it only that was necessary to the restoration of the parts which have suffered from the over-stimulation of the blisters.

3. *Stage of Effusion.*

This stage is one of almost entire hopelessness; the wretched patient must, in great measure, be abandoned to her fate, as regards medical treatment; but, if comfort of any kind can be afforded her, it may be given with as liberal a hand as her demands require. Stimulants, cordials, opiates, may be administered without reserve or apprehension; for the disease has spent upon her the full force of its powers; for in this instance we do not know what can injure, or what can benefit, the case; in this stage, then, we may depart from the rule laid down in the second.

There is something remarkable in the tendencies of this disease to gangrene, (in our acceptation of the word, see p. 416,) and from gangrene to extensive effusion. It is this act of effusion that prevents the inflammation from ending in sphacelus; and well accounts for Dr. Clarke not finding "the parts in a state of gangrene," (sphacelus.)

The effusion is not only sometimes excessive, (see p. 357, &c.,) but must be looked upon as almost necessarily fatal.[1] This effort of the over-exerted vessels is marked by the following symptoms:—

Pulse fluttering, and scarcely to be numbered; the belly enormously swelled, and tympanitic; cold sweats over the whole body, or confined to the face and extremities. The skin on the hands sometimes is shrivelled, as if they had been immersed in warm water for a long time; repeated chilliness, without reaction; vomiting, or rather gulping up, a dark brown, or coffee-coloured fluid; involuntary stools, and sometimes a profuse dis-

[1] "The mischief which takes place in the cavity of the abdomen, whether by extravasation, suppuration, or gangrene, renders the disease incurable; except in the two former cases, by some extraordinary efforts of nature, of which Dr. Gordon has related three instances, where the confined fluid made its way by a direct outlet; in two at the umbilicus, and in the third by the urethra."—Hey, p. 166.

charge from the uterus, of a bloody sanies or black grume. Delirium, or perfect collectedness; the tongue frequently moist, and an attempt is sometimes made at cleaning; (sometimes,) convulsions; death.

Sect. VIII.—*General Directions and Rules.*

It is of the utmost consequence to the woman labouring under puerperal fever, that her nurse or attendant should be faithful in the discharge of her duties; that she have sufficient understanding to comprehend the directions of the physician; enough good sense and fidelity to put them in practice; resolution to withstand the wayward and improper demands of the patient, should they be made; and courage enough to bear up against the encroachments of friends, and the preposterous recommendations of visiters.

Every direction of the physician should be most promptly put in practice by the nurse, or other attendants; and that it may be done to the letter, it should be impressed again and again upon the minds of those who may have charge of the sick, by delivering them circumstantially, and without ambiguity, or the possibility of misapprehension. Nothing should be left to construction; the directions must be so peremptory and clear as to prevent the possibility of subterfuge. To ensure this in the best manner, the physician should ascertain, at each visit, whether his orders have been strictly complied with; and if they have not, he should not pass over the neglect, or it will surely be repeated.

As this disease advances rapidly to a fatal termination when unchecked, as nothing can give this check but the most prompt application of suitable remedies; and as on the extent and force of these remedies their success mainly depends, especially on the proper quantity of blood to be drawn; the physician should perform this operation himself, or be present when it is performed, that he may be satisfied that his intentions are properly fulfilled. The blood should be carefully preserved, that its quality may, in some measure, serve as a guide for the subsequent use of the lancet.

But let us caution the young practitioner against being deterred from a repetition of this operation, if the symptoms continue urgent, because the blood may not manifest the common signs of inflammation, for the general symptoms of the disease will be a better guide than any appearance the blood may assume.

When the blood has been abstracted, let him order purgative medicines immediately, and this may be in any manner he shall think most proper; let him prescribe minutely the regimen of his patient, which must be most strictly antiphlogistic. But let us, however, be exactly understood what we mean by antiphlogistic

regimen; and, as this will refer to a variety of particulars, we shall consider them in detail.

First. The air of the room should be frequently changed by a well-conducted and careful ventilation; its temperature should never exceed sixty degrees; but it may sometimes be lower, when a lower can be commanded. Its purity should be preserved by removing all offensive substances from the room as quickly as possible, when they are tangible; but, if they emanate from the patient herself, the cause should be diminished or destroyed whenever practicable. The lochia, (when not arrested,) are sometimes very offensive: when this is the case, the vulva should be washed several times a day with warm water; the cloths often changed; and one constantly wet with the pyroligneous acid and water, should be kept near the parts; or if this cannot be commanded, powdered lime should be placed under the bed-clothes, and in various parts of the room.

No curtains or other obstructions to the passage of the air should be permitted to surround the bed; and the doors and windows, if at a proper season, or in a proper state of atmosphere, should be frequently or constantly open. The air should not be contaminated by unnecessary breaths; company, noise, and light, should be excluded. The air should not be loaded with unpleasant vapours or smokes, under the pretext of purifying it; for every kind of combustion is injurious.

Secondly. The diet should be made to conform most strictly to the indications to be fulfilled; namely, the reduction of the quantity of blood, and the action of the blood vessels; food, therefore, containing much nourishment, or any stimulus, should be carefully withheld; it should be restricted to toast water, thin barley water, molasses and water, thin rennet-whey, balm tea, lemonade, or gum Arabic water.

Every shape and form of animal substance should be peremptorily forbidden—no chicken water or beef tea should approach the lips of a fever patient; and none should more particularly be forbidden it than the one labouring under puerperal fever. We are persuaded much mischief is created or perpetuated by a want of attention to this circumstance; and it was not without surprise, indeed, we might say, astonishment, that we saw enumerated in the list of antiphlogistic articles in the treatises of Hey and Armstrong "chicken water," than which, few things, in our opinion, can be more improper.

Thirdly. The bed, bed-clothes, body linen, and every other article which may surround the woman, should be changed, aired, or washed, (as their natures may require,) as often as possible; or as may be compatible with the circumstances of the patient, or as a due regard to not exposing her to unnecessary fatigue, will permit.

Fourthly. That, as the abdomen is always very tender, and oftentimes very much swollen, the weight of the bed clothes should be taken from it, by placing a spider, made of sections of a large hoop, tied together in their centres, at right angles with each other, and so placed as to suspend the clothes, and thus protect the abdomen from their pressure. And, as we know from experience, that the wetting of the abdominal surface frequently, by passing a sponge over it, imbued with some volatile fluid, as camphorated spirit, alcohol, or spirit of turpentine, is not only most grateful, but we have reason to believe has been also most useful, the patient should be indulged in it.

Fifthly. The greatest care, and the most delicate management should be observed in administering diet, drinks, or medicine to the patient, or in attending to the effects of the latter; and, that she be not made to suffer unnecessary fatigue, by frequent rising for these purposes, we would recommend the use of the "sick cup" for the first two; a spoon for the second, and a bed-pan for the last; knowing it to be of the utmost consequence to husband the strength, and prevent all needless hurry of the circulation.

Sixthly. To permit the child to be placed every now and then to the breast, that by its gentle and appropriate stimulation it may invite the secretion of the milk, if it has not been formed; or to retain it, if it has been secreted; provided this be managed with so much address as not to worry or fatigue the mother. The sympathy between the mammæ and the diseased parts is obvious, by the effect produced on the one by the situation of the other. We think we have seen this useful.

CHAPTER XIX.

PHLEGMASIA DOLENS.

We have retained the name of phlegmasia dolens, (the phlegmasia alba dolens puerperarum of White,) for a peculiar condition of the lower limb, because its pathology is still as unsettled as it was in the time of Mauriceau, whom we believe was the first that gave any satisfactory account of it; for the description left by Rodrigues à Castro, can scarcely be tortured by any partiality for antiquity into the disease of which we are about to treat, though Dr. Hull complacently inclines to the belief that he was acquainted with it. And we doubt whether the disease of the apothecary's wife, as described by Wiseman, was really the dis-

ease in question, as it is but casually mentioned in his chapter upon "Abscesses and Corrosive Ulcers, arising from distempers of the Womb in Child-bed," and what renders it especially doubtful is, that he declares matter formed in various places.

There cannot be a question, however, that Mauriceau was well acquainted with this disease; as his description is still in the main a pretty faithful one. By this author, and several others, the disease was attributed to some derangement of the lochia, which, when not sufficient, was thrown upon the large nerves of the thigh, and thus created pain and swelling, &c. From the time of Mauriceau, to that of Puzos, the disease appears to have been familiar to a number of practitioners, as Manningham, Mesnard, &c.

It was, however, found after a time, that the appearance of this disease did not obey any particular state or condition of the lochia; and that it was very commonly accompanied by a diminution or suppression of the milk. A new hypothesis was invented, and it was made to consist of a metastasis of this fluid. Puzos, with a great show of reason, has a prior claim to Levret for this suggestion; as the latter himself refers to the former's "Mémoires sur les Dépôts Laiteux," and speaks approvingly of them. These great men were followed by Astruc, who treats expressly upon this subject. Sauvages fully adopted these notions in his nosology, and treated of them under different genera and species.

Van Swieten, Lieutaud, Raulin, Sell, &c., all seem to have acknowledged the great influence of the milk upon the constitution, and each has treated of its metastasis.

Mr. White, of Manchester, was the next to invent a theory of this disease; he made it consist of an obstruction, rupture, or a disordered condition of the lymphatics, and he was followed in this opinion by others. Mr. Trye pretty freely criticised the opinion of Mr. W., and said, that though he could not discover any grounds for supposing the trunks of the lymphatics to be ruptured in labour, "yet he could easily conceive, that the obstruction to the return of the lymph may commence in the primary inflammation of a trunk or trunks, and that probably this may be the case more frequently than he had hitherto discovered or suspected it to be." Mr. Trye was followed by Dr. Hull, in a valuable and highly learned work upon this obscure and debatable disease. Dr. H. says, "The *proximate cause* consists in an inflammatory affection, producing *suddenly* a considerable effusion of *serum* and *coagulating lymph* from the exhalants into the cellular membrane of the limb." Dr. Davis of London, next offered a new pathological view of the proximate cause of phlegmasia dolens, and makes it consist in an inflammation of "one or more of the principal veins within and in the immediate neighbourhood of the pelvis, producing a thickening of their

coats, the formation of false membranes on their internal surface, a gradual coagulation of their contents, and, occasionally, a destructive suppuration of their whole texture; in consequence of which, the diameters of the cavities of these important vessels become diminished, sometimes so totally obstructed as to be rendered mechanically incompetent to carry forward into their corresponding trunks the venous blood brought to them by their inferior contributory branches."[1]

Thus we have five different hypotheses for phlegmasia dolens; of either of which it would be difficult to make a choice, if we consulted their value, either in relation to the phenomena this disease presents, or to the pathological condition of the parts affected, as far as has yet been revealed by dissection. On these several opinions we shall pass a few remarks; and believing neither to be the true proximate cause, think it right to give the arguments against each, that our reading has supplied us with, as well as those that have suggested themselves to us from having attentively observed the phenomena of this painful affection at the bed-side.

The first two opinions, (namely, that phlegmasia dolens is caused by some derangement of the lochia, or from a metastasis of the milk,) will scarcely require a remark, as subsequent observation has abundantly proved that neither has ever had the slightest agency in its production, either as a remote or as an exciting cause. And farther, were either or both to be admitted as contributing to this affection, the pathological condition of the seat of the disease, as caused by them, would still remain unexplained.

Mr. White, of Manchester, must be considered the first writer who had attempted a pathological exposition of phlegmasia dolens, and much credit is due to his industry and learning upon this subject, though we cannot yield to him the merit of having been satisfactory or perhaps even clear. He declares this disease—

"Is owing to the child's head pressing the vessel or vessels which arise from the lower extremities against the brim of the pelvis during a labour pain, so as to stop the progress of the lymph; that the number of valves will effectually prevent it from regurgitating, and if the head continues any time in this situation while the lymph is driven on through the valves by the peristaltic contraction of the coats of its vessels, by the great exertion of the muscles, and the strong vibration of the inguinal artery, though its coats, (the lymphatics,) should be allowed to be stronger than those of the blood-vessels, it must at last burst and shed its contents. When the orifice made in the lymphatic is

[1] London Med. Chir. Trans. Vol. XII. p. 426.

heated, and the diameter of the tube is contracted, or totally closed by the cicatrix, the lymph is retained in the lymphatic vessels and glands of the limb, and the labia [labium] pudendi, and distends them to such a degree, and so suddenly, as to occasion great pain and swelling, which always begin in the part next to that in which the obstruction is formed, and when the obstruction is in part or wholly relieved, or the lymph has found a fresh passage, the part next to it is consequently relieved," pp. 49, 50.

He adds, "If the above hypothesis be true, the predisposing cause may, in all probability, be a weakness in the coats of the lymphatics in such subjects only as have these vessels formed into one principal trunk under Poupart's ligament," p. 55.

Objections to these conjectures of Mr. White will readily present themselves; for it supposes some obstructing cause of pressure to be absolutely necessary. Now, if it be even admitted that the child's head affords this pressure at the brim of the pelvis in some cases, it could not have done so in all the instances in which this disease has appeared. For, 1st, this pressure cannot take place to the necessary extent but in a very few instances, for it is notorious to accoucheurs, that for the most part, in a well-formed pelvis, the head may be even larger than it is usually found, and yet pass without difficulty. 2dly. The portion of the brim of the pelvis at which, in ordinary circumstances, this pressure is found to exist, is not that at which the lymphatics would be subject to its influence; for, as a general rule, it would be behind either of the acetabula. 3dly. That no other part save the head could effectually exert this pressure; yet it is agreed on all hands, that no position of the child, yet discovered, is more efficient in its production than another. 4thly. That a pressure so long continued, and so effectual "as to stop the progress of the lymph," and eventually to cause a lymphatic to burst, must necessarily produce, upon the intervening parts, a gangrenous condition; yet this is a casualty we have never heard of. 5thly. Several circumstances connected with the history of this disease would still remain unaccounted for; as the occurrence of the disease in the opposite limb, and this not simultaneously, but after a considerable interval, and not until after, as a general rule, the first affection is yielding; to the pain and swelling first occurring in the calf of the leg, as it sometimes does; for, if Mr. White's statement be true, that "*pain and swelling always begin in the part next to which the obstruction is formed*," p. 51, the pain and swelling must primarily exist in this part of the limb; therefore it is not indebted to pressure exerted on the brim of the pelvis for its existence.

The arguments just urged might appear sufficient for the purpose intended by them; but as several conclusive ones have been

employed by Mr. Trye to the same end, we think we should not be rendering justice to this gentleman, did we altogether omit them. He observes, that "no experiment has shown that the lymphatics can be torn, without doing equal violence to the other vessels of the part. That practical anatomists have ascertained that these vessels will bear a weight of quicksilver, equal in effect to a much greater force than is required to circulate the lymph towards the thoracic duct. That the force exerted by the child's head in its passage cannot exceed that of the pad of a tourniquet on the arm or thigh. That if the trunk of a lymphatic be compressed, its contents are forced inwards towards the thoracic duct, if no obstruction exists: in this case its sides are squeezed together, and will consequently occupy so little space, that it cannot well be ruptured at the compressed part. If a rupture then take place, it must be below the compressed part—but no reason can be given for this taking place always in one place, namely, within Poupart's ligament, rather than in the leg or thigh."

Besides, we have known two instances of this complaint to follow abortions in the early months; and once in a premature delivery between the sixth and seventh month: in this instance the child had been dead at least one month previously to its delivery. Again, my friend Dr. Chapman informs me of a violent case having occurred in a patient in our Alms-house, labouring under cancer uteri. But, above all, it has happened to the arm of the male, as recorded by Dr. Ferriar,[1] besides an instance of the same kind that fell under our own notice in 1788. A gentleman, pretty far advanced in life, received a severe contusion on the point of his shoulder, by the overturning of the mail coach. He, however, paid but little attention to it, and merely rested it in a sling, as it did not prevent his attention to business for several days; but at the end of that time the arm became very painful, and swelled rapidly; considerable fever was excited, and the gentleman was obliged to keep his bed. The control of the motions of the limb was entirely lost; and every attempt to move it was attended by exquisite torture. The character of the swelling was precisely that of the *milk leg*, to which it was compared at the moment by my preceptor—that is, he declared, had the same affection befallen the leg of a lying-in woman, he would have called it a *milk leg*. After a tedious but an active treatment for three months, symptoms of amendment showed themselves; but it required a long time to restore the limb to its former usefulness—indeed, from what we afterwards learnt, it never became as strong as the other.

[1] Medical Histories, Vol. III. p. 92. By Dr. Ferriar.

This case is not unique: several instances purporting to be of this kind are recorded; all of which, perhaps, are not entitled to the distinction. Dr. Ferriar's case is not an instance, perhaps, of genuine phlegmasia dolens; nor do we regard the one related by Littre, under the care of Luminer, to be without exception, as there was well-marked red inflammation.[1] Yet that related by Dr. Heermans appears to have been a genuine instance of phlegmasia dolens in the male.[2]

Besides, we are informed that phlegmasia dolens has happened to women not pregnant; of this we speak from the authority of others; for we have just said above that this took place in a patient under the care of Dr. Chapman, in our Alms-house; and Dr. Beck mentions a case where it occurred in a woman of fifty-two years of age. And we may add to these, the observations and cases related by Dr. Tweedie in Edin. Med. and Surg. Jour. Vol. 30, p. 250. Dr. T. introduces the history of the disease by saying, "It corresponds very much in its character and progress with the puerperal *phlegmasia dolens*, although, from its resemblance to the œdematous swelling of the lower extremities, which occasionally appears after cases of protracted fever, its real nature and treatment are apt to be overlooked.

"This disease, which I conceive to be inflammation of the cellular tissue of the limbs, differs, however, in many particulars. For example, in all the instances I have seen, the swelling has been confined to one extremity, making its appearance first about the upper part, extending gradually over the whole limb, and being attended with acute pain. It does not retain the impression of the finger, as in common œdema, which generally commences round the ankle and foot, and seldom extends much higher.

"I have treated several cases of this affection within the last four years at the London Fever Hospital. All the subjects of it were females, two of whom were under twenty years of age, and unmarried. I have been informed, however, that one case occurred in a male, but I have not been able to trace the history or treatment.

"It may be remarked, that in all the instances which came under my notice, active depletion had been employed in the treatment of the fever, so that the convalescences were rendered somewhat tedious; and the first warning of the disease was given by symptoms of general excitement, which led me to expect either relapse or some visceral inflammation. In a few hours, however, the cause of the general disturbance became more apparent, from the patient complaining of stiffness in one of the

[1] Medico-Chirurgical Review, for April, 1829.
[2] Dr. Francis's Memoir, p. 9.

lower extremities, followed by aching pain either about the upper and inner part of the thigh, or in the ham, around the knee or calf of the leg; and as rheumatism is by no means an unfrequent accidental accompaniment of fever at certain seasons, the uneasiness and pain in the limb are, at first, very apt to be ascribed to this cause.

"In the course of twelve to eighteen hours the pain and stiffness increase, and, on the limb being examined, it is found somewhat swollen and perceptibly hotter than the opposite; but there is no redness of the skin, which, on the contrary, has a smooth, white, shining appearance, and the cutaneous veins are distended with blood, and occasionally tortuous. As the disease advances, the swelling extends uniformly over the limb from the upper part of the thigh to the toes, and feels tense and elastic, but not at all diminished by the semiflexed position of the limb, which the patient generally refers.

"I also remarked the total inability to move the limb, not so much on account of pain, as from want of command over the voluntary muscles. This peculiarity has been noticed by Mr. Burns in the puerperal *phlegmasia dolens*.

"When active treatment has been adopted, the pain abates; the swelling loses its elasticity and tension, so as to retain partially the impression of the fingers about the foot and ankle, and the heat of the limb diminishes, but the power of moving it continues for a long time considerably impaired."

Dr. Moore, of Ipswich,[1] makes a singular remark upon the opinions of Mr. White, the force of which we cannot perceive, though it purports to overthrow at once his doctrine. He says, "In refutation of Mr. White's opinion, I will state, that in no instance that has come to my knowledge, has the disease preceded parturition." Now, how this refutes Mr. W's. opinion we cannot understand: for, in no instance does Mr. W. require that parturition should always happen before this disease can be produced; and in our humble opinion, had Dr. Moore known an instance of phlegmasia dolens preceding parturition,[2] it would have told very much more against Mr. W's. hypothesis, as the great agent in producing this disease, in Mr. White's opinion, would have been wanting; namely, pressure from the child's head during labour. But Dr. M. should not have attempted to pass his want of knowledge of such cases for more than it is worth; since many cases of the kind alluded to may have taken place without his being apprized of them; for, certainly

[1] New England Medical Journal, Vol. II. p. 229.

[2] Puzos relates two instances of this kind; one took place at the fourth, and the other at the seventh month of utero-gestation. And we have seen two instances in which it followed premature delivery.

it has happened, as stated above, that this disease has occurred to unimpregnated females. Now, if this be so, we do not see by what law of pregnancy the woman is secured against an attack.

By the by, we may remark, that Dr. M. dismisses the hypotheses of Dr. Trye and Dr. Ferriar still more cavalierly, and with still greater brevity. Of the first he says, "It is mere supposition;" of the second, "In reply to Dr. Ferriar, I will adduce the fact, that phlegmasia dolens as frequently follows natural and easy labour, as difficult and laborious."

These assertions of Dr. Moore, purporting to be refutations, were to pave the way for an explanation which he immediately after offers, in the following terms:—

"After an attentive observation of cases, and a careful examination of the subject, I will humbly offer the following explanation as the most satisfactory to me.

"During gestation, the abdominal muscles, their vessels, and integuments, are in a state of great preternatural distention; immediately after parturition, when the distending cause is removed, these parts powerfully contract in order to regain their natural dimensions. If this effort be unequally exerted, if it be suddenly excited by the application of cold, if the lymphatic vessels be over-distended at the time, if plethora or great debility subsists in the vessels themselves, an interruption and accumulation of the fluid ensues; the great and long accumulation of which, acting as an extraneous and offending cause, will occasion inflammation. In persons of a plethoric and irritable habit, inflammation may quickly supervene; while, on the other hand, in a person of a contrary habit, it may be more tardy in its progress," p. 230.

We would now ask, if ever hypothesis was more heavily laden with conjecture and supposition than this—it has not even the merit of ingenuity, much less an imposing probability, to reconcile its meager pretensions. The initial postulate is not founded in fact; for we cannot look upon the distention imposed upon "the abdominal muscles, their vessels, and integuments," as "preternatural," since, in being put upon the stretch by pregnancy, they are but performing one of the offices for which they were designed. His second is no better grounded; for, after parturition has removed the distention, the abdominal muscles, their vessels, and integuments," do not "powerfully contract in order to regain their natural dimensions;" for this is performed silently and gradually, and requires for its completion many days. We have just shown how reluctant Dr. M. is to permit either Mr. Trye or Dr. Ferriar, *to conjecture* or *to suppose;* yet, he says himself, in the attempt to make out his explanation, "*if* this effort," &c., "*if* it be suddenly," &c.; "*if* the lymphatic vessels," &c.; such and such things will happen. That is, we shall have inflammation from an accumulation of lymph in the

lymphatic vessels; and in what essential point does this "explanation" differ from that of Mr. White, or Mr. Trye? In none, that we can see, if we except the agent by which the interruption to the circulation of the lymph is effected—in one instance it is the head of the child; in the other it is *cold* and *debility*.

We should not have thought it necessary to notice this "explanation" in an especial manner, had not the doctrine it inculcates led to a mischievous and reprehensible plan of treatment; for the Doctor observes, "In the ordinary mode of treatment, much time is lost in inefficacious use of diuretics; and much mischief and pain produced by the application of blisters, and other stimulating remedies." "From the view here taken of the subject, I am fully disposed to consider it as a local disease, and decidedly recommend the early application of a large emollient poultice, which, by its relaxing and resolving power," (recollect the Doctor's opinion of the cause of the disease, is debility and over-distention,) "will, in a great majority of cases," (has he ever seen a sufficient number to determine this important point? the Doctor only mentions two cases, and neither of which was the disease in question,) "prevent the formation of a distressing and tedious disease. And when it does not produce this most desirable effect, I should recommend its continuance, with an intention of producing *early suppuration, which, I think, next to resolution, the most speedy and safe termination of the disease*," p. 231.

Was ever a disease less understood; or a more preposterous remedy ever proposed! The continued application of an emollient poultice is every thing that is necessary for the relief of a milk leg.

We have good grounds for believing Dr. Moore had never seen a case of phlegmasia dolens, if we take the two cases he details as specimens. In the first case the patient complained of a pain in the right hip and back; rigours and watchfulness; *a rigidity and soreness of the abdominal muscles;* pain in moving the limb; *the pulse a little increased, slight thirst, and perfectly clean tongue.* For this state of things, antimonials, cathartics, and fomentations were prescribed. These proved ineffectual; *bark, guaiacum, and a continued blister* to the thigh were employed.

"This course evidently increased the local affection. *The upper part of the thigh, the inguinal glands, and right iliac region became more tumefied, which gradually extended to the hypogastrium and labium pudendi.*

"In the early stages of the swelling it appeared in *ridges* and *bunches*, occasionally assuming a *livid*, and at other times a *purple hue.*"

It became more uniformly diffused, tender, hotter than natu-

ral; shining, but not much discoloured. The fever kept pace with the local affection; the pulse was small and very frequent. The swelling increased. "With an intention *of rousing the action of the absorbents*, a *volatile stimulating liniment* was applied, and in turn hot vinegar: but these had no better effect than the blistering!!

"Digitalis was now administered; this increased the debility; *the inflammatory appearances became more evident; the pain, heat, soreness, and redness increased, until a discharge took place from a ruptured lymphatic* in her side, about an inch from the inferior spinous process of the ilium," p. 228.

The second case is still farther removed than the first, in our opinion, from a case of phlegmasia dolens. This occurred in a person of robust constitution: it supervened on natural labour. On the second day after the delivery, the patient experienced a great rigidity of the abdominal muscles, which increased in tenderness, and presented an appearance of "ridges and bunches;" the constitutional symptoms high; these increased until *suppuration took place from an "opening a little below the navel."*

We have italicized such parts of these histories as show, at once, that they were not instances of phlegmasia dolens; and also such as have excited our wonder in regard to the treatment. If the case just related, and others that we shall have occasion to mention presently, be received as instances of genuine phlegmasia dolens, the pathology of this disease will remain unsettled to the end of time.

We have already cursorily mentioned the opinion of Mr. Trye, of the proximate cause of phlegmasia dolens; we shall now expose it more in detail. He says, p. 70, "I have considered the *proximate cause* of the swelling to be seated in the *lymphatic glands*. I will not contend that it must be so universally, because there is a probability that the original seat of obstruction and inflammation may, in some instances, be in the principal trunks of the absorbents within the pelvis, independent of, and abstracted from, the iliac glands; in which case the inflammation may be continued along the absorbent vessels downwards; that is, towards the labia pudendi, leg, &c., as well as upwards, or towards the thoracic duct."

Dr. Ferriar is also mentioned as an inventor of a theory for phlegmasia dolens; but he does not appear to be entitled to this claim, since he has only adopted the opinion of Mr. Trye upon this subject. And were we even to admit that he had not seen Mr. T.'s work, he must, at least, have been familiar with the opinions of Drs. Denman and Latham. The lectures of the former he most probably attended.

We shall make no observations upon the opinions of Mr. Trye and Dr. Ferriar, until we have noticed the hypothesis of Dr.

Hull, which we shall now give in his own words. He states that "from an attentive consideration of the whole of the phenomena observable in this disease, and of its remote causes and cure, no doubt remains in my mind, that the proximate cause consists in an inflammatory affection, producing suddenly a considerable effusion of serum and coagulating lymph from the exhalants into the cellular membrane of the limb." "The seat of the inflammation I believe to be in the muscles, cellular membrane, and inferior surface of the cutis. In some cases, perhaps, the inflammation may be communicated from these parts to the large *blood vessels*, *nerves*, and *lymphatic vessels*, and *glands* embedded in them."

We have united the hypotheses of Mr. Trye, Dr. Ferriar and Dr. Hull, because they are essentially one and the same: namely, that the proximate cause is an inflammation of the lymphatics and glands of the groin; though, as a whole, Dr. Hull assumes a much broader ground; so much so, indeed, that Dr. Davis styles it, with much point, "a capacious theory."

The objections which present themselves to these explanations are, first, their incompatibility with one especial phenomenon of the disease, namely, the *shining white* appearance of the limb throughout the whole course of the disease; and this so notoriously so, as to have it as one of its genuine characters. In all instances of inflammation of either muscles, skin, lymphatics,[1] or blood vessels, redness is a never-failing attendant, as is well known to all who are familiar with this disease. Yet this does not happen in phlegmasia dolens, notwithstanding the numerous tissues Dr. Hull involves in the mischief. 2d. That if all these tissues were in a state of inflammation, this inflammation would manifest itself by the ordinary phenomena of this affection:—namely, heat, *redness*, swelling, pain; yet we find *redness* always wanting in phlegmasia dolens, when this disease is pure and uncomplicated. If muscle be inflamed, redness is sure to be present; if the skin, the same thing occurs; if the trunks of lymphatics (absorbents) be the seat, we have frequent opportunities to witness that they become red; and when the lymphatic glands are in this condition, redness notoriously attends. And though Dr. Hull does not suppose that all these parts are simultaneously affected, but successively, yet it alters not the fact that in phleg-

[1] In the time of Dr. Hull, the term "lymphatics" was understood to mean the lymphatic absorbents; the researches of Bichat had not then made it necessary to distinguish this set of vessels and those whose office it is to convey the lymph, being either the termination of arteries, or the beginnings of veins. And we beg the reader to keep in mind, that where "lymphatics" are mentioned in the quotations of Mr. White, Mr. Trye, Drs. Hull, Ferriar, or Moore, that the lymphatic absorbents are to be understood.

masia dolens redness is always absent during the whole course of the disease.

3d. Besides, this progressive extension of inflammation cannot well be sustained, as the rapidity of the disease is such, sometimes, as to involve the whole limb in the course of a very few hours; whereas, the transmission of inflammation by contact even, is sure to be much slower; yet it would not fail to betray its progress by all the common phenomena of inflammation, were it to exist in such parts.

4th. When the lymphatic glands become inflamed by the absorption of some acrid substance or specific poison, the venereal poison for instance, they not only become red themselves, but the lymphatics even that convey the poison, can be distinctly traced in their course, by the vivid red that marks their inflamed coats.

5th. The ordinary inflammation of the several parts declared to be involved in phlegmasia dolens, moreover, do not thus suddenly effuse serum: of this, proofs present themselves every day in the usual progress of inflammation, as in rheumatism, wounds, contusions, the insertion of poisons, &c.

6th. When the lymphatics are inflamed, together with their glands, it is acknowledged by Dr. Ferriar himself, that "the vessel can be distinctly traced in its course by its hardness and enlargement, and frequently by a *slight inflammation* of the superincumbent skin, forming *a red or purple streak*, and extending with the affection of the vessel."[1]

7th. We do not agree with Dr. Ferriar in the assertion, that "the violent pressure on the internal iliacs, and the accompanying veins and nerves, which takes place during delivery, must undoubtedly be considered as a powerful occasional cause of *lymphatic inflammation*," p. 120. Now, if this were true, phlegmasia dolens would be of more frequent occurrence than it is; since this pressure is common to many labours, yet the disease in question is one of very rare occurrence.

8th. Because, in phlegmasia dolens, one of its inseparable characters is the exquisite sensibility of the *whole limb;* so much so, in most instances, that the patient cannot bear the slightest pressure, or the slightest motion; yet Dr. Ferriar informs us that "the pain in *lymphatic inflammation* is referred to the enlarged *glands*, and *is not remarkably increased by motion: there is more stiffness than actual pain in the whole limb*," p. 102.

9th. Because, in the twelve or fourteen cases of exquisitely formed phlegmasia dolens, that we have seen, we never were able to trace the "inflamed lymphatics," or to feel the "enlarged conglobate glands;" yet both of these circumstances are de-

[1] Med. Hist. Vol. III. p. 95.

clared to be constantly present, by those who espouse the pathology under consideration.[1]

10th. Because Dr. F. furnishes a case himself, which disproves his own explanation, viz. "Jane Waters, aged twenty-five, was delivered by an accoucheur of her second child, Dec. 26th, 1797, after being four days in labour. During delivery she lay upon her left side. December 27th, she was affected with pain and swelling of the left knee, which descended to the leg and foot of the same side. On the 28th of December the swelling began to rise from the left knee and to affect the thigh. It extended up to the left groin and labia pudendi. I saw her for the first time on the 3d of January, 1798. I found the swelling tense, uniform, not discoloured; that there was a great sensation of rigidity in the limb, and that it was *extremely painful on being touched or moved.* She felt *exquisite pain in the ham*, where I could perceive the lymphatics *a little enlarged. The glands of the groin were not affected*," p. 127.

In this case there was an exquisitely formed phlegmasia dolens: for it was attended by all the essential characters of the disease; the limb was exquisitely tender to the touch; the swelling was uniform and elastic; it was not discoloured; the glands of the groin were not affected, and the lymphatics in the ham could be perceived to be a "a little enlarged." Here then was a case of genuine milk leg, without inflamed "lymphatics" or "conglobate glands." We think we have said enough to prove that this pathology is not well founded; and that if inflamed lymphatics, or enlarged glands be present, that they are the consequences, and not causes of the disease called phlegmasia dolens.

The next hypothesis in order, and it is the last with which we are acquainted, is one of late date; it is by Dr. David Davis, a teacher and practitioner of considerable celebrity in London.

Dr. Davis attempts to prove that phlegmasia dolens is the consequence of an inflammation of one or more large veins; ending in the production of an extraneous membrane, or other obstructions, within their cavities; and thus offering remoræ to the returning blood from the extremity.

This view of the subject, from its supposed truth, has gained much more notoriety than can be sustained by facts, though supported by the powerful aid of Velpeau; and we may add, that of Bouillaud and Ribes. When we say this, we would not wish to be understood as implying the slightest disbelief of the truth of

[1] Dr. Hull declares the same inability: he says, "I have never met with either enlargement or inflammation of the lymphatics in any stage of the complaint; I am, therefore, convinced that this is a rare occurrence, and by no means essential to the disease."—*Essay on Phlegmasia Dolens*, p. 116. It will, therefore, be perceived, that our observations apply to Dr. Hull only, as far as he admits the lymphatics to be involved.

Dr. Davis's statement; on the contrary, we are fully persuaded that neither he, nor the gentlemen who, both directly and indirectly, support his doctrine, have set down nothing that they did not see—the only question then is, were the dissections of these gentlemen cases of phlegmasia dolens? this is the point at issue —whether phlebitis and phlegmasia dolens are identical; or, in other words, are the cases related as cases of the latter, any other than instances of the former?

Before we proceed farther in the examination of this question, it will be proper to determine the absolute character of phlegmasia dolens, from the best accredited *practitioners;* for to them alone should the appeal be made. And, perhaps, one of the older writers of this kind will be the safest guide upon this occasion. Callisen has summed up the characters of this disease most happily in a very few words, making allowance for the introduction of one of its supposed causes in his time, namely, a metastasis of milk. "Œdema puerperarum, aliis lacteum *est* tumeur elasticus, albescens, renitens, calidus, dolens, foveam impressi digiti haud retinens, puerperis haud infrequenter, gravidis rarissime infestus." He has, however, omitted a very material feature of the disease, namely, fever; for as far as we have seen, this condition of the system has always been present, and sometimes to an alarming degree.

The essential characters then of phlegmasia dolens may briefly be stated to consist of the following strongly marked characters. 1st. Fever, always, to a greater or less degree. 2d. Pain generally commencing in the hip, groin, and sometimes the back. 3d. Swelling commencing at the seat of pain, and proceeding with more or less rapidity down the whole limb. 4th. The swelling elastic, not retaining the impression of the finger. 5th. The whole swollen part white, even more so than natural, in some instances, but never red when uncomplicated. 6th. The whole limb exquisitely sensible to the touch. 7th. Total inability to move the limb, and action always creating great suffering. 8th. The temperature of the whole affected part much above the natural temperature. 9th. The labium pudendi of the diseased side almost always participates in the swelling, but never extending to the other labium, unless the other limb be also affected. 10th. After the first leg begins to improve, or is, perhaps, nearly well, the opposite leg runs through a similar course, and sometimes with an aggravation of symptoms. 11th. That the limb thus affected, rarely suppurates. 12th. That this disease is rarely attended by danger. 13th. That after the more violent stage of inflammation is abated, which generally happens, under proper treatment, about the sixth or eighth day, that the swelling abates its elastic character, and takes on that of a common œdema. 14th. The milk usually diminishes, and sometimes disappears.

We have been thus particular, yet we trust, strictly faithful, in enumerating the essential characters of phlegmasia dolens, that the coincidences and discrepancies between it and phlebitis, may be more readily subjected to comparison.

Symptoms and General Character of Phlebitis.

In giving an analysis of the symptoms of phlebitis, we have chosen the one condensed in the Medico-Chirurgical Review, Vol. IV. p. 509, from Recherches Cliniques pour servir à l'Histoire de la Phlebite; par M. J. Bouillaud, M. D. Revue Méd. Avril et Juin, 1825; and from Exposé succinct des Recherches faites sur la Phlebite; par M. F. Ribes, M. D. Revue Méd. Juillet, 1825. We have chosen these in preference to other authorities, because they are the latest who have written on this subject, though we have no evidence that they consider phlebitis identical with phlegmasia dolens. We shall give the English version, as contained in the above named Review. First of Dr. Bouillaud.

"*Symptoms.*—1. The symptoms of *inflammation in the trunk of a superficial or external vein are easily recognised.* The member swells, becomes hot, painful, or is even the seat of *phlegmonous erysipelas.* The *vessel itself feels tense, hard, knotty, or like a cord. Abscesses* not unfrequently form *in the course of the vein.*[1] The pain, our author thinks, is more dependent on an affection of the neighbouring nerves, than on inflammation of the vein itself. *Œdema of the limbs is a very common attendant on phlebitis of one or more of the principal veins,* and evidently arises from the mechanical obstruction to the return of the blood—the veins being now acknowledged to be the principal conductors of the serous exhalations, (see note to page 434,) that takes place in the cellular tissue. Such are the signs of local phlebitis.

2. When the inflammation extends to the whole or to a great portion of that vast membrane which lines the internal surface of the venous system, we constantly find that a violent fever is lighted up. Among many of our patients, the fever presented all

[1] It seems, from late observations, that there is a marked difference in the pathological conditions of the internal coats of the arteries, and that of the veins: in the former, the adhesive form of inflammation is almost sure to occur; while in the latter, the suppurative is very certain to take place. This latter circumstance has been frequently observed in the veins of the brain, and in those of the uterus. Dr. Clarke observed this condition of the uterine veins in women who he declared had died of puerperal fever; but, most probably, it was from hysteritis; and Dr. Abercrombie and M. Gendrin saw marks of a similar kind in the venous tubes of the brain. It must, however, be admitted that the internal coats of the veins have yielded lymph when inflamed, and obliteration has followed, as in the arteries. Dr. Baillie relates a case in which the lower *cava*, from the emulgent veins to the entrance of the *venæ cavæ hepaticæ*, was obliterated, as he believed to have been produced by the effusion of lymph and consequent adhesion.

those characters which are attributed to what are called *putrid adynamic or typhoid fevers;* and indeed the term *putrid* is perfectly applicable, since after, nay *before* death, there are unequivocal signs of decomposition, or a kind of putrid fermentation of the fluids."

Second. M. Ribes says, "*The veins are very frequently inflamed*, and this affection is a *very dangerous one.*" (Yet phlegmasia dolens is a rare disease, and is very seldom dangerous.) "In incipient phlebitis, the patient experiences a slight *pain in the track of the veins affected.* These vessels *swell and become prominent, presenting a light bluish colour, and subsequently a brownish pale hue.* The circulation *ceases in the vessel*, and the blood becomes more or less *decomposed.* If the circulation should be re-established, the contents of the vein are carried into the current of the circulation, and dangerous consequences may ensue," p. 512. "Phlebitis is a *serious malady*, and is often *quickly mortal.*" Ibid.

We have thus brought into opposition the characteristic symptoms of phlegmasia dolens and phlebitis, which we now submit to the reader's candour to determine the strength of their analogy; or rather, how far they have a right to be considered as absolute identity. Let him run his eye over such parts of the description and consequences of phlebitis as are emphasized, and compare them with the general history of phlegmasia dolens, and he will at once perceive, we are certain, their discrepancies, and determine their entire want of sameness.

But lest it be thought that we have drawn our conclusions from premises not attempted to be sustained by Dr. Davis, we will produce in a very short compass all the symptoms detailed in his histories, that he may speak for himself.

"Case I.—Caroline Dunn, æt. 21; weak constitution, delivered on the 7th of February; severe labour; some hemorrhage after delivery; placenta removed artificially. 8th. Pulse 90; tongue white and moist; no pain in the abdomen from pressure; soreness in vagina. On the 13th, slight fever; pulse full and quick; costive; tongue white and dry; the *labia pudendi inflamed and œdematous;* some headach; respiration difficult; discharge from vagina resembling cream. 17th, better; 21st, much better; 22d, still better; 26th, worse; leg and thigh much swollen; pain in the groin; no signs of inflammation; no pitting on pressure; 28th, no better; leg pitted on pressure; March 3d, total insensibility; limb equally swollen; 4th, died."

We shall introduce a part of the dissection as performed by Mr. Lawrence, "which is a sufficient guarantee for its correctness."[1]

[1] Med. Chir. Review, p. 381.

Dissection.—"The left lower extremity presented a uniform œdematous enlargement, without any external discoloration, from the hip to the foot. This was found, on farther examination, to proceed from the ordinary anasarcous effusion into the cellular membrane." The inguinal glands a little enlarged, as they usually are in a dropsical limb, but without any sign of inflammation. The femoral, external iliac, common iliac, firmly plugged, apparently by a coagulation of blood. The other veins thickened, except the saphena and branches, which were healthy. The substances occupying the cavities of the vein were the product of inflammation.

We cannot do better than present the observations on this case contained in a review of Dr. Davis's work on phlegmasia dolens.

"We take the liberty of differing from Dr. D. on the identity of the case described with that of real phlegmasia dolens. We ground our first doubt on the *fatal issue* of the case, which is contrary to the general experience of the profession hitherto; for it must be recollected that Zinn's patient died of asthma, and not of phlegmasia dolens. If, then, there are very few cases on record, where phlegmasia dolens in itself proved fatal, we have at least grounds for supposing, (we do not say it amounts to proof,) either that Dr. Davis's case was *not* phlegmasia dolens, or that its proximate cause was different from the proximate cause of phlegmasia dolens in general."[1] The reviewer asks, in a note, "Is it likely that so serious, and generally so fatal a disease as an inflammation of the internal coat of veins under other circumstances, should be almost invariably devoid of danger in phlegmasia dolens?"[2]

"Our main doubt, however," continues the reviewer, "is grounded on the anatomical, or rather, the pathological difference between Dr. Davis's case and those described by authors. We have Mr. Lawrence's authority that the enlargement of the limb proceeded from *ordinary anasarcous effusion* into the cellular substance. Does this state harmonize with the description of phlegmasia dolens as given by authors, or as seen by practitioners? It is contradistinguished, by all the writers we have perused, from *anasarcous infiltration*, (and certainly from our own observation in at least four or five cases,) by the tense, or hard, or, at all events, elastic swelling of the limb—*not pitting* on pressure," p. 382.

Dr. Bateman runs the following parallel between the two diseases:—"The swelling is general and equal over the whole limb; it is much harder and firmer than in anasarca, in every stage of

[1] Med. Chir. Rev. Vol. V. No. 18, p. 382. [2] Ibid.

the disorder; it is not so cold, in any state of the disease, as in the dropsical swelling, nor so much diminished by the horizontal position; neither does it *pit* when pressed upon by the finger, nor does any water issue from it when it is punctured by means of a lancet."[1] "When these descriptions are compared with Mr. Lawrence's dissection, we think every unprejudiced mind will agree with us, that Dr. Davis's case was of a character wholly different from genuine phlegmasia dolens," p. 383.

"CASE II.—A lady of a sanguineous, irritable temperament, died suddenly in the midst of apparently high and perfect health, on the 20th of September, 1819, six weeks after confinement. She was seized with peritoneal inflammation the day after delivery, which yielded to active measures. Ten days after this, she complained of *deep-seated pain in the groin, and along the great vessels.* Dr. D. found the *limb swelled, and very painful,* but by leeches and blisters, this new inflammation was speedily reduced, and in a week the swelling had entirely subsided, the patient having recovered the perfect use of the limb. From this period she convalesced rapidly and satisfactorily, but died, as above stated, in the midst of apparent health."

In what possible respect can this case be looked upon as a case of phlegmasia dolens? Is there a single coincidence of symptom between the two diseases? The only circumstance on which even a remote analogy can be based, is "*a deep-seated pain in the groin,*" and that "*the limb was considerably swelled and exquisitely painful.*" But will such conditions of a limb alone, constitute phlegmasia dolens?

"CASE III.—This is a case communicated by Dr. Davis's friend, Mr. Oldknow. A woman was delivered, by an easy labour, in September, 1820. She did well for about three weeks. She was then attacked by a violent diarrhœa, for which she took astringents. Fever continued. On the thirtieth day after delivery the diarrhœa returned, and 'the left lower extremity became *swollen and painful,* with considerable increase of fever.' Four days afterwards she died," p. 435.

In this case the only pretence for calling this a case of phlegmasia dolens, during the life of the patient, was the existence "of swollen and painful lower extremity;" and no proof of its having been a case of this kind is adduced by the examination after death. The whole attention of the operator appears to have been occupied in the examination of the blood vessels: "the femoral vein and iliac veins were much enlarged, and contained adherent layers of coagulated blood. The same appearances, but in a lesser degree, were observed in the cava as far as the entrance of the renal veins. The coats of the veins were highly

[1] Rees's Cyclopædia, Vol. 28.

inflamed, and intimately attached to the surrounding parts. The absorbents and glands were slightly enlarged." These morbid changes may, perhaps, with propriety, entitle this case to stand with those of phlebitis; but it has no possible right to be ranked with those of phlegmasia dolens.

The sudden death of this patient, we conceive, will effectually prevent her case from being acknowledged as one of phlegmasia dolens,[1] for we believe, from what we have seen and read of this disease, that it is the first instance, if it be one, that has terminated so suddenly in death. Indeed, this termination is so confessedly rare, that phlegmasia dolens has never been looked upon as a disease of danger,[2] though one for a time of great suffering, and almost always one of tedious convalescence.

CASE IV.—A lady of a delicate constitution and irritable habit, was delivered on the 2d of July, 1821. She was doing well until the seventh day; on this day she was exposed to cold, and was seized with a rigour. During the forming of the hot stage, she felt a pain in her left side, which increased rapidly, and for which she was bled without much relief. She was afterwards bled, leeched, and blistered. The affection of the chest was relieved, but fever continued. In the evening of the 9th, "Unequivocal symptoms of phlegmasia dolens declared themselves." She died on the 23d of the same month.

"On dissection, there was effusion and inflammation in the chest, 'the left lower extremity from the hip to the toe, was considerably, but not greatly enlarged, and there was an evident enlargement of the labium pudendi.' The iliac veins on both sides were unusually turgid with blood. When the left was opened, it was found to contain a firm coagulum of blood, not adherent to the vessel at that place. Higher up, however, in the common iliac portion, the coagulum was adherent to the internal surface of the vessel. The left internal iliac was greatly inflamed, and the diameter so much contracted as to be almost impervious.

"In the above case, we have to regret that nothing is said of the state of the limb from the 9th of July, 'when the unequivocal symptoms of phlegmasia dolens commenced,' till the patient's death. In the dissection, again, nothing is said of the pathological condition of the limb. The whole attention is concentrated on the vessels. Now it ought to have been Dr. Davis's chief and main object to prove, in all these cases, that the disease was

[1] It is true, that in the case related by Puzos, the patient died on the fifth day, but she appears rather to have "died of the doctor," than of phlegmasia dolens. He relates another that took place in the fourth month of pregnancy, and which proved fatal on the ninth day.

[2] Dr. Francis relates a case, on the authority of Dr. Mann of Boston, in which death took place from sphacelus, in consequence of the limb being punctured with a view to draw off the water supposed to be present.

really phlegmasia dolens, by an accurate description of the symptoms and state of the limb, and then to have traced the *cause*, if he could. But it is evident that the first and main object is almost totally neglected—or where it is adverted to, as in Mr. Lawrence's dissection, it makes against the question—and, therefore, we do not consider ourselves bound to subscribe to our author's etiology, without having the necessary documents respecting the symptoms and dissections of the cases."[1]

We cannot, however, hesitate to believe, that the swelling spoken of was produced by the inflammation and obstructions discovered by dissection, as Ribes tells us it is one of the common symptoms of phlebitis; but we must deny that that swelling and the swelling attending phlegmasia dolens are of one and the same kind, as this author expressly called it, "œdematous."

From all the facts adduced by Dr. Davis in support of his pathology of phlegmasia dolens, sufficient evidence is not afforded that "the proximate cause of this disease is a violent inflammation of one or more of the principal veins within and in the immediate neighbourhood of the pelvis," &c. Nor, in our opinion, is this pathology sustained by the cases related by Velpeau, purporting to illustrate the cause of this disease, though they coincide with the observations of Dr. Davis.

Dr. Velpeau has drawn the same conclusion as regards the proximate cause of phlegmasia dolens as Dr. Davis, though not aware he had been anticipated in this by the latter gentleman. We will briefly relate his cases—that is, we will mention every circumstance which may bear upon the question.

Case I.—Valette, eighteen years old, had a tedious labour: on the third day she was much affected by some melancholy tidings. She now laboured under an acute pneumonic affection. Eleven days after delivery she had chills and fever, pain in the groin, hypochondria, and left side of the pelvis. On the forty-first day, the left leg was found to be swelled, with pain in the hip and groin, and ultimately in the whole limb. "The whole extremity *œdematous*." Pressure gives pain only in the groin. On the sixtieth day she died.

Dissection.—"When the left extremity was cut into, it was found much infiltrated in the cellular tissue. The lymphatic glands of the groin were much swelled and red,—the muscles small and pale,"—crural vein red externally, and its cellular coat thickened. This was the case in all its deep-seated branches. Purulent matter was found in these veins, and pus in the cava, and purulent deposition in other places. Can any one recognise phlegmasia dolens in the history of this case, or in the details of the dissection? There was a swelled leg, it is true—but it is

[1] Med. Chir. Rev. p. 385.

expressly declared to be "œdematous," and this is the only resemblance.

Case II.—Damiens, thirty-five years of age. She had a quick delivery. During the first three days nothing remarkable occurred. Fourth, fever, and deep-seated pain in the pelvis. On the thirteenth day the lower extremities are much swelled and painful, especially the left. Fifteenth, breathing affected, difficulty in passing water, diarrhœa. Twentieth, the lower extremities more swelled and red, (enflées et rouges,) belly swelled and painful. Twenty-sixth day, died. In the dissection there was nothing to justify the opinion that this was a case of phlegmasia dolens: or perhaps that it was a case even of phlebitis.

Case III.—Has even less claim to the title assumed for it than the preceding—the only possible circumstance to rest such an opinion upon is, that "there were pains in the *upper* and lower extremities—the latter *beginning to show œdema.*"

Such are the kind of cases which of late have been foisted upon the medical public, for instances of phlegmasia dolens; than which, nothing can be less similar. Dr. Davis has evaded all the difficulties that might attach to a regular history of the appearances of the limb, by declaring, in some instances, that "*to-day unequivocal signs of phlegmasia dolens appeared:*" we must, therefore, take his word for the truth of the observation; —not, however, that we would insinuate that he would, in the slightest degree, misrepresent the appearances which led him to this conclusion, but that he was satisfied with symptoms which we think did not constitute the disease. The cases of Bouillaud and Ribes are precisely of the same character, as regards their relation to phlegmasia dolens, though they may be looked upon as instances of phlebitis. But to Velpeau we cannot even accord this acknowledgment.

We find also a case recorded in the Medico-Chirurgical Review, for 1825, Vol. III., new series, p. 540, which purports to be a case of phlegmasia dolens, that required the amputation of the leg in consequence of an apprehended sphacelus. The only circumstance on which the title of the case is founded is, that "*the limb was* NOT *evidently swelled, but there was a good deal of tenderness in and about the ham.*" But, unfortunately for Mr. Davies, the narrator of this case, he had just before informed us, that "*the limb became instantly paralyzed from below the knee to the toes*, by a sudden metastasis of excruciating pain from the left loin and hip, which suddenly flew down to the leg and foot." On dissecting the amputated limb, "the veins were found completely distended with firmly coagulated blood; their coats were thickened, and their inner surfaces very much inflamed. In consequence of which Mr. Davies declares that "the morbid appearances tend to confirm the truth of Dr. Davis's views

of the pathology of phlegmasia dolens." To which we might perhaps agree, if there had been a single symptom of this disease present; or if Dr. Davis had proved that phlebitis and phlegmasia dolens were one and the same disease; or even, if in phlegmasia dolens, that phlebitis were constantly present. This latter, however, we confess, would have been a most difficult task, as the rare fatality of phlegmasia dolens leaves but very scanty chances to do so; while phlebitis is very frequently fatal. But what will be said by the advocates of this new doctrine of phlegmasia dolens to the observations of M. Tonnellé upon puerperal fever, and in which the subject of phlebitis is mentioned as a frequent occurrence; and which has a direct bearing upon the subject in question; and, we may add, with a peculiar force, as his facts were not intended to be applied to the use to which we now wish to apply them—namely, that of 324 cases of puerperal fever, there were 134 in which pus was found in the veins and lymphatics; yet even œdema was present but in one instance; and not one word is said of phlegmasia dolens? Could such a state of a limb have been overlooked by apparently so careful an observer as M. T., had it been present? And if uterine phlebitis be the cause of phlegmasia dolens, would it not be reasonable to have expected one case of it, among so many instances of phlebitis? And farther, that phlebitis uniformly gives rise to a typhoid form of fever; a circumstance well worthy of note, as no such type of fever has ever been found to belong to phlegmasia dolens.

Having thus reviewed the several opinions which have been offered on the proximate cause of phlegmasia dolens, we are every way assured, that they will appear to the greater part of medical practitioners as unsatisfactory as they have to us; but that they unequivocally prove, that this interesting subject of pathological research remains still unsettled. We have, upon this subject, but two suggestions to make; namely—1st, be the affection seated in whatever tissue it may, its character is highly inflammatory; 2d, that in our opinion, this inflammation occupies exclusively the white lymphatic vessels of the cellular membrane of the several textures of the limb; for we are every way satisfied that redness is not essential to inflammation, as we have before declared. We therefore agree in part with Dr. Hull, since he admits among the tissues he particularizes as being involved in this disease, the cellular membrane as one. And in support of the opinion we have adopted respecting inflammation, we think we cannot do better than employ his arguments against redness being a *sine qua non* to its existence.

"Should it be objected to this theory, that there is no redness of the external surface of the cutis, my answer is, that redness, though a general attendant of inflammation in the human body, does not constitute inflammation, nor is it a circumstance essen-

tially necessary to inflammation. The cheek, in blushing, for example, presents redness and increase of heat to the eye and touch: but there is no pain, consequently no inflammation. The cornea, on the other hand, when we cannot trace a single vessel carrying red blood beyond its margin, is frequently affected with inflammation: there is pain, heat, &c., and small abscesses or ulcers, or depositions of coagulable lymph, commonly called specks or pearls, take place in it. Animals which have no red blood in any part of their system, are not exempt from inflammation. And the less acute kinds of inflammation which take place in the membranes of the brain, the pleura, peritoneum, tunica vaginalis, testes, &c., are not always characterized by an evident redness, especially when an extravasation of coagulating lymph, or a large effusion of serosity soon happens and moderates them, as in peritonitis *conjunctiva*, and apoplexia *hydrocephalica* Culleni, and the acute stages of hydrothorax, ascites, and hydrocele. Hence, it may happen that when the symptoms of a disease induce the attending physician to consider it as a phlegmasia, dissection may be supposed to show that he is mistaken as to the nature of the complaint, if redness be admitted as an essential mark, a *sine qua non* of inflammation. Indeed, this point appears to be almost entirely given up by late pathologists."[1]

What the exciting causes of this disease may be, we are not exactly prepared to say, as it takes place in two diametrically opposite conditions of the system; namely, that of repletion and of exhaustion. Thus, we have seen it in two highly plethoric females; in one the labour was rapid and easy; in the other it was rather tedious, and very painful. In several others we have witnessed it to follow severe and extensive uterine hemorrhages, and were we to decide from our own experience as to the frequency of its occurrence after any one condition of the system, we should say it was most apt to follow severe uterine losses of blood than from any other single cause.

Method of Cure.

However writers may disagree as regards the particular structure occupied by this disease, they are unanimous with respect to the nature of it—they all maintain it to be inflammatory. About this there can be no mistake, as all its symptoms and habits declare this condition of the tissue to be present. We have fever with a highly active pulse; a hot, dry skin; acute pain; and swelling, attended by heat of the part; excessive soreness of the

[1] Hull on Phlegmasia Dolens, p. 209.

limb to the touch; great thirst, sometimes; white tongue, &c.; in a word, every thing that betrays an active local inflammation.

Blood-letting and Leeching.

The means of cure consist in depletion from the circulating system, both general and local—we therefore abstract blood from the arm, to the full extent the system will bear at the time; but which must be repeated, if the fever be but little or none abated, and the pain be undiminished. So soon as the force of the pulse is diminished, if the fever continue, leeches should be applied to the diseased limb, in such number as shall secure the loss of five or six ounces of blood. Our practice, in the use of leeches, is to have them pretty much dispersed over the surface of the limb, that their bites may not be too near each other; as they sometimes leave troublesome sores, when crowded together where the skin is much distended. The leeching may be repeated in a day or two, provided the pain, heat, and elastic feel of the swelling, remain severe or unabated. We, however, never apply the leeches until arterial force is weakened by bleeding from the arm; as relief is by no means certain unless this has taken place. In two or three cases we were obliged to repeat the bleeding six or seven times, and the leeching two or three, before the disease yielded.

Purging, &c.

In aid of blood-letting, we employ purging to a liberal extent, during the continuance of the active stage of the disease; and, for this purpose, we prefer the saline cathartics; especially when combined with an equal weight of calcined magnesia; the following are the usual doses: ℞. sulph. magnes., magnes. alb. ust. āā. ʒiij. M. div. in iij. One of these portions to be given every two hours, in a wine-glassful of sweetened water or lemonade, until they operate freely.

We have, also, found decided advantage in the nitrous antimonial powders, until fever is reduced, or perspiration established. The regimen, throughout the active stages of the disease, is to be strictly *antiphlogistic.*

Topical Applications.

Much injury is oftentimes done by the injudicious employment of stimulating embrocations or liniments: this should be peremptorily forbidden. No kind of application whatever should be

made to the limb itself until after the fever has abated and the pulse is reduced by bleeding; or leeching the limb. When this is effected, the vinegar vapour bath may be used, two or three times a day, with great advantage, but not before.

The mode of employing this is as follows: the limb should be bared in the bed, and the bed-clothes be raised from it by means of a common hoop from a barrel being cut in two and tied together at right angles with each other; this must be made to straddle the leg. Three bricks must be heated pretty hot, and then plunged in vinegar; after they are loaded with the vinegar, they may be folded in cloths, and one applied to each side of the limb, and the other to the foot. The bed-clothes must now be returned over the spider, to keep in the vapour arising from the bricks. This steaming should be continued until the patient complains of feeling weak; they are then to be removed. This process is almost certain to produce a copious perspiration over the whole extent of the limb. Should this, however, not be found to be the case upon examining the limb in fifteen or twenty minutes after the application of the bricks, but instead, the limb is found to be hot and dry, these articles should be removed, as they will not succeed if they are even allowed to remain, as the heat of the limb is beyond the *sweating point.*

When this happens, we may be certain that the bricks have been applied too early—that is, before arterial action was sufficiently reduced. In this case, we must renew the depleting remedies, either general or local, or both. On this account, it is always well to examine the pulse carefully before we have recourse to this remedy. But when perspiration is induced, the patient is almost certain to experience great relief, though for the most part but temporary at first; it must, therefore, be renewed whenever the pain becomes excessive.

Opium.

From pain, and that excessive for the most part, being the constant attendant upon this complaint, it has been thought too generally, that opium, in some form or other, should be administered —but this, in our hands, has always been found highly injurious in the early and active stage of phlegmasia dolens. It should, therefore, never be given until the system be sufficiently reduced to bear this drug with advantage. And when it is eligible, the best mode of administering it is by injection. And, for this purpose, a tea-spoonful of laudanum, in a gill of warm-water, may be used as occasion may require. Or Dover's powder may be used at bed-time, in the dose of ten grains, when the system can

bear with profit the stimulus of its opium, and especially when the skin is indisposed to perspiration.

As a general rule, the system will not bear the use of opium as long as the swelling preserves its elastic character, and this is generally from six to eight days. Nor should any stimulating applications to the limb be resorted to, until the intumescence puts on the appearance of œdema; for, until this change takes place, the active inflammatory stage has not passed away. About the time above specified, (for we have known it happen earlier or be retarded later,) pain, heat, fever, and swelling, begin to abate, and the patient is able to support her sufferings with less complaint. She can now, for the most part, bear the limb to be moved, or its position changed, without so much torture, though still very far from being relieved.

External Applications.

We have always made the changes now spoken of the guide for an additional application to the affected limb; (that is, when there is an abatement of the constitutional symptoms, and the swelling will retain the impression of the finger,) we now order a moderately stimulating embrocation, consisting of a beef's gall mixed in three half pints of brandy, rum, or whisky. With this the limb is to be bathed, (not rubbed,) two, three, or four times a day, as the patient can best bear it, having it a little warmed previously. We would here suggest a caution to the nurse, that is more important than might at first sight appear—namely, to literally bathe the part, and not to rub it. Very great mischief is oftentimes done, by not paying attention to this rule, in all local applications; for nothing but evil can follow the other mode, so long as inflammation, (however moderate,) continues to occupy the parts. But after this condition is removed we believe that advantage may be derived by gentle friction, as it appears to contribute to absorption.

Blisters.

These remedies have been recommended by almost every writer on the subject of phlegmasia dolens—but why, we are at a loss to understand. For they are either not the appropriate remedies, or we have been very unskilful in their application. We have never had recourse to blistering but twice, and sorely did we repent each application. The disagreeable irritation produced by its operation in the first instance, and the tedious, disagreeable ulcer that followed, we imagine might have been

owing to some accidental condition of the system, or perhaps idiosyncracy; this led us to a second trial, but we experienced the same inconveniences: since when, we have altogether abandoned their use. Before we ordered this remedy, it is proper to state, that we thought we had reduced the system to the proper blistering point, but in this we may have been mistaken. Besides, however, the disadvantages just mentioned, arising from blistering, there are others which should not be lost sight of—namely, preventing other local applications, and especially the one mentioned above, which, in our opinion, is very much more useful; and, secondly, by obliging the patient to maintain one position unnecessarily long, which is of no trifling moment to the invalid.

Bandaging.

This application has been recommended in phlegmasia dolens by some practitioners, ab initio; but our own experience obliges us to say of it, that we have either been very unfortunate in our *lot* of patients of this kind, or if this be not so, that those who have professed to have derived advantage from it have mistaken œdema for phlegmasia dolens. For we certainly have never met with a case of this disease, that could bear, without severe complainings, the weight of the bed-clothes upon the affected limb, much less a bandage tightly drawn. We, however, must be honest, and confess that we have ever been deterred from the application of the bandage in the early stage of the disease, from the presence of so much sensibility in the part; in the last stage, we have known peculiar benefit derived from its use.

It is almost a constant sequence, that after all inflammation has disappeared, that the limb will remain swollen and feeble. For this condition, much advantage is derived from bandages, frictions with the dry hand, fumigating the limb with the smoke of burning rosin, and exercise in a carriage. The fumigation is conducted as follows: the patient's limb is to be placed across a tub, in the bottom of which there is a small chafing-dish with hot embers. A little powdered rosin is to be strewed upon the embers, and the fumes prevented from escaping by having a blanket spread over the limb and tub—this may be repeated twice a day.

It will be proper to observe that the limb should be kept a little elevated during the whole of the disease; this is best done by a board well protected by pillows, and placed under the leg, with its lower end raised as high as the patient's feelings will permit.

After the febrile symptoms have disappeared, the patient's diet may be a little more generous: she may take thin chocolate

a few oysters, chicken water, or soft boiled egg, &c., and if there be much debility, any of the tonics in common use may be employed with advantage; and these will be aided by a well regulated system of exercise, which must of course be left to the discretion of the physician, and to the circumstances of the patient.

CHAPTER XX.

OF MILK ABSCESS.

It is scarcely necessary to mention that the female constitution is much disposed to fever after parturition; the various circumstances attending gestation and labour, which are calculated, on the one hand, to produce predisposition, and on the other to excite fever, leave the system but little opportunity to escape this evil, unless much care be paid to guard the woman against all exciting causes. But, unfortunately, the practice of those who have charge of females at this period is the very reverse of what is dictated by reason, or is sanctioned by experience; and hence the production of fever, in a greater or less degree.

From the changes which almost invariably take place during pregnancy, and immediately after delivery, it is evident that it is the design of nature that the mother shall provide nourishment for the child, at a certain period after delivery; and for the fulfilment of this design, milk is generally formed in the breasts, as soon after delivery as the necessities of the child require.

The evidence of the capacity of the mammæ for the production of this fluid, consists in their tumefaction; and when this secretion is best formed, it is neither attended with excessive swelling nor painful distention. Nor is the arterial system excited to fever for the purpose of preparing milk, as is erroneously supposed by many. But we too frequently witness the very reverse of what should have taken place under proper management, from the neglect of the most obvious rules of propriety, and the total disregard of the suggestions of nature.

Milk fever is so familiarly spoken of, and is so constantly expected, as to be considered a sine qua non to the production of this fluid: hence it is rarely guarded against by suitable restrictions; and hence the frequency of the mischief it creates when too violent, or when unrestrained. It is evident, from this view of the subject, that there must be an error in the premises assumed respecting this function; it is this error which we now

wish very briefly to point out, that the consequences may be avoided.

It is, in our view, an absurdity to suppose that nature designed the child should be furnished with nourishment at so much expense of health and comfort to the mother. That she should run the risk not only of ill health herself, but also of being deprived of the capacity to fulfil the object for which this secretion is intended; or, in other words, that the capacity to furnish support for the child should deprive the mother of the power of making the provision. For in how many instances do we see the useful purposes of the breasts destroyed by inflammation and suppuration?

These considerations make us pronounce the fever, which accompanies the swelling of the breasts previously to the formation and discharge of the milk, a disease of artificial origin: in proof of which, beside what we have endeavoured to establish from reason, it can always, or with very few exceptions, be avoided, by proper observances on the part of the patient herself, and those who may have charge of her.[1] The rules for this purpose are simple, and of easy execution.

First. After delivery let no stimulating article be given the patient, as wine, or liquors of any kind; spices, chocolate, &c.

Second. To allow her no animal substance whatever, either in a liquid or solid form, as soup, &c.

Third. To permit her the free use of cool drinks, as toast-water, balm tea, water alone, or lemonade.

Fourth. To give, on the morning of the third day, a cathartic of sufficient power to procure three or four evacuations.

Fifth. To allow fresh air to pass freely through the room, and around her bed; and not to heat her body by an over-quantity of bed-clothes, or by being surrounded by curtains.

But the last direction must be so conducted as not to endanger her taking cold.

Sixth. To apply the child early and frequently to the breast.

By observing these rules, we know that milk fever may be avoided in almost every instance. But should these rules not be observed, the distention of the breasts may become so great as to excite severe pain; and from an overstretching of the tubuli lactiferi, inflammation may be excited, which may terminate in suppuration.[2]

[1] We have occasionally met with cases where the formation of milk was always attended with fever, notwithstanding every precaution was used to prevent it. These instances must be looked upon as the exceptions to the rule; for fever to any extent does not occur, perhaps, once in a thousand times.

[2] We shall relate a very extraordinary case of the accumulation of milk in the breast, from Prof. Scarpa, both on account of its singularity as well as for its practical value.

"A young peasant of small stature, but robust constitution, perceived, ten days

It must, however, be acknowledged that *milk fever* is not the only cause of mammary swelling and abscesses. There is a peculiar liability to this disease during the first fifteen or twenty days after delivery; and the causes may be various and obvious, as well as special and hidden. Blows or bruises; bad nipples; exposure to cold, either general or partial; a neglect of discharging the milk in proper time from them; pressure from stays or corsets; metastasis, &c. At other times the breast swells and inflames without our being able to determine the cause. Some women are more liable to this affection than others; and they will sometimes have a repetition of it with almost every child they may have.

Sometimes a chill announces a derangement in the system; soon after which a pain is felt in one of the breasts, and, upon examination, a tumour may be generally discovered in the substance of it; at other times no such tumour can be felt, but the breast is observed to swell and be tender when pressed.

From this variety in the early stage of this complaint, it is evident that the seat of inflammation is not always confined to the same tissue in this organ; sometimes it is a portion of the gland which is attacked, and at others it would appear to be the cellular substance alone that is involved.

When the gland is attacked, it suddenly increases in size, becomes extremely tender to the touch, and gives a great deal of acute pain. The breast sometimes swells to an immense size, especially such as are naturally large, and what is called fleshy. The woman finds no comfort or ease in any posture, and the weight of the breast itself occasions much severe suffering.

after a second accouchement, a tumour in the left arm-pit, not preceded by any inflammatory symptoms or pain. She continued to suckle her infant from both breasts—but more especially from the left, in the hope of dissipating the swelling; but the effect was quite contrary to her expectations, for the flow of milk in that breast diminished every day; while the tumour in the axilla increased. This tumefaction gradually extended to the mamma, and at last occupied the whole of it. In the course of two months the breast got to such a size, that it measured thirty-four inches in circumference, and when sitting the mamma rested on the thigh of that side. The skin covering this tumour presented no particular alteration in appearance, except that it was rather tense and shining, the subcutaneous veins being dilated. Prof. Scarpa thrust a middle-sized trocar into the tumour near the axilla, where the integuments appeared thin. A flow of pure milk followed, and ten pints were drawn off in a continued stream. The celebrated Dr. Frank was present at this operation, and was not a little astonished. When the milk was evacuated, the mamma was scarcely more voluminous than the other. The wound made by the trocar was enlarged, and a tent introduced for the purpose of facilitating any farther discharge. The milk was sent to M. Scopole, Prof. of Chemistry, and its analysis showed, that notwithstanding the long sojourn of the fluid in the breast, it differed in none of its physical or chemical qualities from the recently secreted milk of a female.

"The obliteration of the cavity where the milk was lodged could not be effected till a seton was established there, The cure was ultimately complete."—Med, Chirur. Rev. Jan. 1827, p. 221.

Fever is excited in the early formation of the local affection, and will be of different degrees of intensity, as the inflammation of the gland may be extensive, or as the system may be disposed to febrile action, or as it may be confined to the cellular membrane.

The progress of the inflammation to suppuration, though always constant if not interrupted, is not always equally rapid: sometimes it requires many weeks before the pus will discharge itself, or permit an outlet to be made for it. But much will depend upon the seat of the gland that may be affected: if it be deep, it will require a longer time, and so on. It may, however, be observed, as a constant rule, that the inflamed gland is always longer before it suppurates than the cellular membrane when it is the seat of the inflammation. It is besides very much more painful; and is attended with higher sympathetic fever, though the breast never becomes so large as in the other instance.

In the variety of this complaint now to be noticed, the same remote and exciting causes may have operated; though we cannot say why the cellular membrane should have been selected for its seat. It commences by the same general phenomena, except we believe that it is always preceded by chill; and the first intimation the woman may have that it has "fallen on the breast," is a swelling and tenderness of the part upon pressure. The breast is now rapidly distended, and generally in an equal manner; that is, without a circumscribed tumour within its substance.

The whole progress of the inflammation, &c., in this variety, is vastly more rapid than in the other, and were we to judge merely from appearances, is more alarming; the swelling is much greater, but the pain is much more moderate. Indeed, we have seen it run on to suppuration without the slightest pain except from pressure. This variety passes through the same stages as the other; and pretty much after the same manner, if we except the rapidity of its march. We have seen it pass on to suppuration in the course of a week. The external inflammation is much less intense, and is very rarely attended by œdema. Indeed, we have seen very extensive suppuration with scarcely any discoloration of the skin. It is also much less amenable to remedies; for it is very rarely made to resolve itself, however early attacked or vigorously pursued the plan may be.

The two varieties may be combined, and it is not very unfrequent that they are: when this takes place, the inflammation of the gland always appears first, and the cellular membrane afterwards becomes implicated, either from an extension of the original inflammation in the gland, or by taking on this action later; for we have never witnessed the cellular membrane injured, un-

til some time after the gland; nor have we ever seen the gland injured from the inflammation of the cellular membrane.

However, if the progress of the gland to suppuration be slow, or the diseased part be very deep-seated, the cellular membrane may remain free for a long time, unless the complaint have been treated by stimulating or other improper applications; or by the early use of poultices. In this case, the part becomes enormously swelled; the epidermis separates from the true skin; a great number of small vesications appear, and the depending part of the breast becomes œdematous, and sometimes even discharges a considerable quantity of serum; indeed, the whole of the skin, covering the inflamed part, appears thickened, and saturated with a fluid, which escapes upon the smallest injury done to the part.

This is so conspicuous sometimes, as to disguise the inflamed appearance of the integuments; and if it be pressed by the point of the finger, the impression will remain a long time, though it be not in a depending part.

Of the Treatment.

There is no inflammation of the phlegmonous kind that runs on to suppuration with so much certainty, and sometimes with so much rapidity, as that which attacks the mamma. On this account, not a moment is to be lost in temporizing; for an impression must be made, and that quickly, or all efforts will be unavailing, and the woman often be made to suffer for a long time an acute and almost never-ceasing pain.

Is this failure to procure resolution a necessary and an unavoidable consequence? Or is it, in part, owing to the first period of the inflammation being either neglected, or improperly treated? We have said, that the inflammation of the breast runs on to suppuration with great certainty: by this, we would wish to be understood, that, if let alone, or if ill-managed, it will rarely fail to suppurate; therefore, if an attempt be made to counteract this constant tendency, the remedy should be of the most decidedly antiphlogistic kind, and applied early.

But our want of success in resolving mammary inflammation, does not exclusively arise from the pertinacity of its course; for there are several other causes, which almost constantly operate with equal certainty.

First. It is almost constantly submitted to the management of the nurse, or subjected to the "infallible cure" of some old woman.

Second. To very inadequate means being advised, and persevered in, until the time for the successful application of the proper remedies is irretrievably lost; or,

Third. To stimulating and heating applications being used, which quickly inflame the skin externally; which unites with the one which has already attacked the breast within; and thus making it necessary to contend with two enemies instead of one.

Fourth. To a want of perseverance and conformity to the prescriptions of the physician, after he has seen the breast, because immediate relief may not be experienced, or because some other plan has been advised.

Fifth. To a false delicacy and fear on the part of the patient, lest the part be examined.

The above causes are almost sure to operate against the early use of proper remedies; and it is almost certain to happen, that the physician is not consulted, until so much mischief is done, that he cannot, but in part, repair it. From what we have experienced, when a fair chance has been offered us to oppose this disease, we are of opinion, that it need not suppurate near so often as it does. This holds out a strong inducement to the woman not to temporize, lest she incur an injury that will not be repaired through life.

It is never too soon to oppose this disease; and if a very early opportunity occur, the woman should be advised as soon as possible to employ the remedies, and to follow the plan now to be advised.

1. *Local Applications.*

We have never found any application so successful in the very early stage of this disease, as the frequent use of warm vinegar to the part. Its efficacy appears to us so certain, when sufficiently soon employed, that we need not in many instances look for any other remedy. It is particularly prompt in that condition of the breasts, in which a want of proper drawing leaves them; or where they become greatly and painfully distended by the sudden secretion of milk, but which cannot be extracted with ease, or in sufficient quantity to relieve the tension, either from a defect in the external or inferior extremities of the tubuli lactiferi, or a proper conformation of the nipples themselves.

These accumulations are always painful, and easily provoked to inflammation, by either the use of improper food, or improper local applications. It is therefore every way important that this tendency should be arrested in limine. For this purpose the vinegar is the most comforting, and, at the same time, the most certain, with which we are acquainted.

This application is highly useful also in the commencement of both the first and second varieties of mammary abscesses; and should be employed most perseveringly for at least twenty-four hours. If the pain or intumescence be not abated by this time,

leeches should be applied in sufficient number to abstract from eight to ten ounces of blood, and their wounds encouraged to bleed by cloths wrung out of warm water, or a soft bread and milk poultice.[1] The poultice is, however, to be removed as soon as the bleeding ceases, and its place to be supplied by a piece of linen rag, spread with fresh hog's lard; or a plaster of hog's lard and common flour, incorporated and spread upon a cloth sufficiently large to cover the breast.

These applications are to be continued until the leeches' bites are sufficiently healed to bear again the use of the vinegar, or the reapplication of leeches. We would use the first when we are certain the disease has diminished; and the second, if we thought the disease to be gaining ground, or stationary. For it must be recollected, no truce is safe with this inflammation. We would therefore persevere in the leeching until we cannot hope to prevent suppuration.

When this happens, let it be remembered, we are not to promote the tendency to suppuration by poulticing, &c.; for this only increases the pending mischief, by the formation of a greater quantity of pus, and the consequent destruction of a greater quantity of the substance of the breast, by which its future usefulness may be entirely destroyed. It should, therefore, be a never-failing rule to treat a mammary inflammation as if it were not to suppurate.

From the period in which we look with certainty for the breast to suppurate, to the time at which this takes place, some saturnine application should be employed steadily. We are in the habit of using the following liniment for this purpose, and we think with advantage.

℞. Ol. Olivar. Opt. - - ℥ij.
Liq. Plumbi sub. Acetatus, ℥j.
Æther Vitriol. - - ℥ij.
Tinct. Thebaic. - - ℥j. M.

A rag to be moistened with this liniment, and applied to the part frequently.

Dr. Clarke speaks highly of the following formula, for the same purpose.

℞. Cerussa acetata, ℥j.
Acetum. Distil. ℥ij. f. sol. adde
Sp. vin. rect. ℥j.
Aq. Distil. ℥v. M.

This is to be applied constantly to the breast, cold, by means

[1] Late experience has convinced us, that leeching is very much more successful when it is performed below the breast, instead of from the tumid or inflamed portion of it, as is usually done. We would therefore recommend the application of the leeches to be made about an inch below the circular margin of the mammæ.

of a piece of linen. By this plan we prevent the formation of an over-quantity of pus; we preserve the integrity of the external covering, and we prevent œdema almost certainly.

Dr. Caffe states, (Jour. Hebdom. vol. ii. p. 23,) that in secretions of milk, attended by swelling and acute pain, the following embrocation acted with immediate benefit and relief.

℞. Aq. distil. Prun. Laur. ceras. ℥j.
Æther Sulph. - - ℥j.
Ext. G. Opii, - - grs. iij. M.

Apply it by means of fine linen, well wet with it.

And Ranque recommends another application in the following terms:—

"The swelling of the breast which precedes the formation of mammary abscesses is caused, in the first instance, by the retention of milk and the consequent distention of the lactiferous ducts. But this is not the only cause of the local derangement that so rapidly follows; for the vascular system of the mammæ is wonderfully increased preparatory to and during lactation; and, therefore, when this augmented circulation of the breasts is baffled in the performance of its proper function,—the secretion of milk,—it often tends to form, with great rapidity, vicarious and unhealthy products. Hence arises the obstinacy of many such cases; and hence they are frequently not found to be amenable to the common methods of treating local congestions and inflammations.

"All practical men are consequently obliged to adopt various methods of treatment; and the skilful accoucheur is often enabled, by attention and pains, to save his patient from the suffering accompanying such affections."

Ranque, impressed with certain theoretical ideas, which it is unnecessary here to discuss, was led to the use of the following liniment:—

℞. Extracti Belladonnæ, ℈ij.
Aquæ Laur. cerasi, ℥ij.
Ætheris Sulphurici, ℥j.
Ft. Linimentum.

This must be well shaken before it is used. It is to be rubbed into the breast as high as the axillæ, morning and evening, and the breast must then be covered with fine flannel soaked in the liniment. This proceeding must be repeated every day, until the swelling disappears, which is usually on the second or third day. The ether has a smell which to some is very disagreeable; but they ought to bear this inconvenience, if possible, for it adds essentially to the efficacy of the remedy.

2. *Regimen.*

In aid of the local applications mentioned above, the patient must be restricted to a *severe antiphlogistic regimen;* no animal substance in any form should be allowed; nor any kind of liquor be permitted. She may have tea; weak coffee; milk and water; rennet-whey; very thin tapioca; thin sago; arrow-root; roasted apples; fruits of the season, &c. Her drink should be water; toast-water; molasses and water; apple-water; or thin lemonade.

3. *Purging, &c.*

Her bowels should be freely purged daily, by any of the neutral salts, magnesia, senna, &c. And, should there be much fever, she should lose blood from the arm, again and again, if necessary.

She should be confined to the bed, and made to lie upon her back, to favour the retiring of the blood from the breast. The breast should be very lightly covered, instead of being enveloped in many folds of flannel. The temperature of the air should be very moderate, and her drinks cool.

This regimen, &c., should be persevered in, though suppuration be inevitable; indeed, it should be continued until the matter is discharged, either spontaneously, or by art.

4. *Puncturing.*

If matter form in spite of our exertions, the breast must be treated as an abscess usually is. Our general rule is, to let it discharge itself, if the collection be small; but if the quantity be large, and the skin very thin and dark-coloured, we always puncture it with a lancet, and take from it but a small quantity of pus at a time. After we have allowed an ounce, or a little more, to flow, we place a piece of lint upon the orifice, and, for this time, stop any farther discharge. At the end of three or four hours we direct the dressings to be removed, and a fresh quantity allowed to escape, and so on, until the whole has passed.

If there be pain at this time, we direct a soft bread and milk poultice; if there be none, we have it dressed with simple cerate. Sometimes the discharge from the wound is arrested by a portion of dead cellular membrane getting into the orifice; and this is particularly the case in the second variety of this abscess. If this happen, it should be removed by taking hold of it with a

piece of rag interposed between the thumb and finger. Should this, however, occasion pain, or blood discharge itself while making this effort, it must be desisted from; the external portion cut off close to the breast, by a pair of sharp scissors, and the portion in the orifice pushed back by the extremity of a probe, and kept by this means from obstructing the wound, until a sufficient quantity of the pus be extracted. This has to be frequently repeated in some cases.

Some are in the practice of making a large orifice for the discharge of the matter; but this is a reprehensible practice. It is sure to destroy a large portion of the surrounding skin, which is now weakened by distention; it will also occasion a large and deep wound, in which granulations spring up too rapidly for the part to heal soundly. Fungus is almost sure to arise; and a long, painful and weakening sore is left; all of which might have been avoided by pursuing the plan just recommended.

5. *Caustic.*

It is not unfrequent for milk or serum to pass through the wound when it is near healing; and this continues sometimes to be maintained a long time: this is owing to a small portion of fungus having possession of the orifice—this should be removed by the application of the nitrate of silver; which will permit the wound to heal immediately, unless it be the opening of a sinus of some depth. If the sinus be superficial, it is to be removed, by enlarging the orifice by caustic, and then apply pressure; or by exciting inflammation, by injecting in it a solution of corrosive sublimate, in the proportion of a grain to an ounce of water.

6. *Seton.*

But when a deep-seated portion of the gland has suppurated, the wound sometimes will not heal; a deep sinus is formed, which continues to yield pus, in spite of every attempt to close the orifice. For the destruction of this sinus, Mr. Hey recommends cutting through the substance of the breast, to its bottom; an operation, confessedly of great severity, and one which very few would have courage to encounter. Yet, as it is a disease which never cures itself; as it is always attended by more or less induration of the breast; and as it always excites much uneasiness, and not unfrequently great alarm, lest it be the forerunner of cancer, the woman becomes very desirous that something should be done for her relief, and will therefore willingly submit to any moderate degree of pain, or privation, for this purpose.

Fortunately, a much milder operation than Mr. Hey's has been

recommended; and it has succeeded most satisfactorily in all the cases in which it has yet been tried. This improvement is the seton operation of Dr. Physick, to whom the profession is already so largely indebted for his very many valuable suggestions in practical surgery.

This operation is performed in the following manner: a probe is passed along the sinus, so far as it will go. If the direction be outward, towards the portion of the breast next to the arm, so much the better; but if not, let the point be carried towards the side it most inclines to. When the probe has passed as far as it can along the sinus, the point is urged laterally, until its point is perceived to press against the skin without; at this point it is to be cut down, and the probe forced so far through this little wound, as to enable the operator to seize it either with his thumb and finger, or with a pair of forceps. The probe, which was previously armed with a portion of braid, soft half-inch tape, or a piece of silk riband, is now to be drawn through.

The seton is permitted to remain from three to four weeks, without being disturbed; or until, from the healthy appearance and diminished quantity of pus, there is reason to believe the sinus will heal by withdrawing it. But, should there be a tendency in the external orifices to close too soon after the seton is removed, or before the sinus is supposed to be healed, they are kept open by a small piece of bougie, or sponge tent, until the healing takes place.

Should the matter become hard around the seton, and obstruct the farther flow of pus, it must be removed by carefully washing it with warm water, or by the application of a soft bread and milk poultice. Dr. Physick assured us, that this plan had succeeded entirely to his satisfaction, in the several trials he had given it; one of which we witnessed ourselves. And he is of opinion, that this operation will always succeed if there be no cancerous tendency in the parts.

7. *After-Treatment.*

After the healing of the abscess, a considerable hardness remains in the breast, which will require a long time for its absorption; this creates a good deal of uneasiness in the patient, lest it be a scirrhus. On this point, her fears may be composed; as the tumour which remains will eventually be taken up by the absorbents, as it is nothing but coagulated lymph; but the absorption may be promoted by keeping the part warmly covered, or by the repeated application of warm vinegar. If this occur in winter, a piece of rabbit skin may be used, with the furred

side next to the breast; if in summer, a piece of fine flannel will answer very well. Or the part may be rubbed twice a day with opodeldoc.

CHAPTER XXI.

HYSTERIA.

THE nervous system, like the vascular, the muscular, &c., is liable to certain and specific derangements. The symptoms arising from this disordered condition of the brain and nerves are familiarly called nervous; but to which it would be difficult to affix any precise or distinct meaning, as they are not only very numerous, and varied, but at the same time peculiar, and not always well defined. This variety creates a difficulty, which, we are persuaded, every practitioner has encountered in the commencement of his practical career; but with which he becomes familiar from a longer acquaintance and study of morbid phenomena; and is at length able to decide, with tolerable certainty, the extent of their agency in modifying the diseases of the other systems; or can determine, very nearly, *in what degree* they may be considered as belonging to the nervous system.

The disease under consideration may be justly looked upon as the assemblage of very many symptoms, the nature and extent of which must necessarily be much diversified, as the seats of sympathy in several organs of the body may be in a fewer or a greater number; and as these may be more or less important.

The ancients were of opinion that the affections under consideration arose from some derangement or lesion of the uterus; on which they bestowed very many gratuitous powers. Indeed, many moderate practitioners are still of the opinion so boldly advanced by their predecessors. Dr. Good[1] says, "With a morbid condition of this organ, indeed, hysteria is, in many instances, very closely connected, though it is going too far to say, that it is always dependent upon such condition; for we meet occasionally with instances, in which no possible connexion can be traced between the disease and the organ, and sometimes witness it in males as decidedly as in females."

That a certain condition of the nerves of the uterus, like any

[1] Study of Medicine, vol. iii. p. 352. Am. Ed.

other portion of the body, may give rise to that combination of symptoms termed hysteria, or from some lesion of other portions of this organ the nerves of the part so injured may be secondarily affected, there cannot be a doubt. But that every derangement of function, or even lesion of this organ, will produce hysteria, there is the most unquestionable reasons to deny; indeed, it seems that when the uterus is seriously affected, as in cancer, there is very often an absence of those distressing symptoms which every body agrees to call nervous.[1]

Many facts seem to confirm this last observation. For when this organ is labouring under an active malady, as inflammation, &c., there is, for the most part, nay, almost always, an exemption from the symptoms constituting hysteria; for there must be a particular condition of the nerves of the part to give rise to the symptoms called nervous or hysterical; or, in other words, there must exist some peculiar condition of the nerves of an organ, before the brain or other portions of the nervous system are called into sympathy with it.

The seat of hysteria would seem to be in the brain itself, instead of the uterus; but the exact condition of this organ that gives rise to the various phenomena of this affection, is by no means ascertained. We know so little of the state of this organ when in health, that we may very readily be deceived by the appearances furnished by post-mortem examinations. It is but reasonable to suppose that each individual has some difference, or peculiarity of organization of the brain; since, in no two, perhaps, are its functions performed precisely alike, at least as far as can be determined by external phenomena. Nor is it probable that we shall ever be much more enlightened upon this subject; since we know nothing, or but very little, of its condition in absolute health.

Our knowledge of the human brain is exclusively derived from dissections performed after death; but what alterations may not take place during the progress of disease, or in articulo mortis? It is true we are very often told by those who have inspected this mass after death, "that the brain was found perfectly healthy."

But where can a standard of comparison be found to warrant

[1] The reviewer of this work, in the North American Med. and Surg. Journal, vol. iii. p. 318, says that "no one, at least of any authority in pathology, has ever maintained that the irritation producing hysteria was located in the uterus, to the exclusion of cephalic irritation. The gentleman appears to have forgotten, or overlooked, the opinion of Villermay upon this subject. This author is a strenuous advocate for uterine influence in this complaint; and that as far as we understand a great many of his (to say the least of them,) singular and very doubtful notions, altogether independent of that condition of the brain which we think essential to its existence. He considers hysteria a misnomer, if this disease be not exclusively confined to females; and which he, at great length, attempts to prove is the case, because this organ is so universally the seat of this complaint.

such a conclusion? Because there was no evident lesion of this organ, does it follow that it was in a perfectly healthy condition during life? Is there not much reason to doubt this, as we very rarely see instances of death where this organ performs its functions without more or less aberration, especially towards the last moments of life? And we know of very many others where the seat of disease had been certainly in the brain, as far, at least, as can be determined by symptoms, yet after death it has been declared to have been found in a state of health.

We are frequently told of altered structure, of inflammation, of too great a density, too great a degree of softness, &c. of this organ. Now these facts only go to prove that in certain conditions of this organ certain changes must have taken place. But does it follow, that in the instances in which no evident change has been found, that this organ was in a state of absolute health, either as regards action or organization? All derangements of this organ cannot consist in the alterations above mentioned. There must be many others, where the attempt to develope them by the knife would be vain.

It is, therefore, not sufficient for the best purposes of pathology, to declare, that the brain was not concerned in the disease of which the patient may have died, because no trace of derangement presented itself upon a post-mortem examination. Who will pretend to point out, by the knife, the difference of condition of the brains of the moping hypochondriac and the furious madman? between the pitiable idiot and the man of genius, &c. &c.? Has the cause of idiopathic epilepsy, of tetanus, of hydrophobia, ever been unequivocally detected by any marks left in the brain after death?

It is true, we have been furnished with the observations of the pathologist and anatomist upon each of these points; but the appearances described by them have so often been seen where neither of these diseases was the cause of death, as to render it extremely doubtful of their agency in the production of them. Besides, we have much reason to believe that a deranged action of the brain may cause death, without leaving the slightest evidence of its nature.

No direct proof, perhaps, can be offered that the brain is the seat of hysteria; for few dissections can have been made with a view to ascertain its condition in this disease, as it very rarely proves mortal; and of these few, none occur to my recollection.[1]

[1] I cannot call to mind the dissection of a "nervous person," (if I have ever met with one,) in which any particular condition of the brain is noticed, though many examinations have been made of those who have died of "nervous disorders." Upon this subject Whytt observes, "Although it appears, from the dissection of those who have died of them, that the stomach and intestines, liver, spleen, *omentum*, mesentery, or uterus, have frequently been found obstructed, scirrhous, or otherwise unsound; yet, as in many other cases of the same disorders, no such

The opinion is founded rather on the causes of this disease, both remote and exciting; upon the phenomena which it presents; and the remedies most successful in relieving the paroxysms, and interrupting their returns; of these I shall speak in their proper places.

The brain, like almost every other portion of the body, has parts which more readily sympathize with it than others; and these sympathies show themselves variously, not only as regards phenomena, but very differently in different portions of the system, as the brain may be labouring under one affection or other. Thus, in passions or emotions of the mind, the liver and stomach are wont to be disturbed; the one, to the more abundant secretion of bile, and the other to the effort of throwing it off. In melancholy, the bowels become torpid: the stomach dyspeptic, &c. In tetanus the whole muscular system is involved, or only certain portions of it. In hydrophobia the muscles of deglutition and respiration, and sometimes the whole muscular system, &c. &c.[1]

In hysteria this peculiar condition of the brain certainly exists; but in what this peculiarity consists, we can neither name nor demonstrate; yet, in this state we see many powerful, nay, awful sympathies called forth, and give rise to a suit of symptoms, which are, by common consent, called nervous. There is no part of the human body that may not have its nerves to sympathize with this condition of the brain; and thus give rise to several phenomena peculiar to the part thus sympathizing; hence, the "*Protean shapes*" this disease is said to assume. Thus, if the nerves of the stomach be the principal seat of sympathy, we shall have a train of gastric symptoms presenting themselves; such as eructations; sour belchings; gastrodynia; pyrosis; indigestion; globus hystericus, &c. If the intestines, we may find tympanitis; spasms; diarrhœa; costiveness; contractions of the abdominal muscles, &c. If the liver, an inordinate, or diminished secretion of bile; biliary calculi; pain in the right side; with a sense of fulness and distention; obstructions, &c. If the kidneys, an immoderate flow of pale or limpid urine; or a very much dimi-

morbid appearances have been observed in the body after death; it follows that these symptoms may frequently proceed from causes, which, eluding our senses, are not to be discovered by dissection. Nay, obstructions, scirrhi, and other disorders of the viscera, observed in those who have died, after suffering from long nervous ailments, seem sometimes to have been the consequences of a long state of bad health, rather than the causes of it." Works, p. 584.

[1] What renders it more probable that the brain, or, at least, the origin of the nerves of this organ, is the seat of that condition which gives rise to the convulsive motions in hysteria, are the experiments and observations of Dr. Philip, in his inquiry on "the relation between the nervous and sanguiferous systems." He says, that "neither mechanical nor chemical stimuli, applied to the nervous system, excite the muscles of voluntary motion unless they are applied near the origin of the nerves, and spinal marrow." Phil. Trans. for 1815, p. 444.

nished secretion; and the little yielded of a very high colour, and sometimes very offensive; severe pain in the parts, resembling the passage of a calculus; bloody urine, &c. If the bladder, incontinence of urine; mucous discharges; retention, &c. If the heart, we shall have palpitations, irregular contractions, faintness, &c. If the scalp, a coldness on the top of the head; or a sense of heat on the back part; great tenderness to the touch; clavus hystericus. If the muscular system, violent convulsions, or nervous twitchings as they are called, &c.

In hysteria certain parts of the body sympathize with the brain more constantly and extensively than others; indeed, it seems, that when the brain is in that particular condition which gives rise to the phenomena constituting this disease, that the kidneys, the stomach, the œsophagus, the heart, and the scalp, almost always participate in the affection, and declare its existence. It is not necessary to the detection of hysteria, that all these parts should be simultaneously affected; they may be so in a stronger or weaker force of combination; or they may present themselves separately and alternately; but whenever all, or even one of them exists, this peculiar condition of the system betrays itself, and marks out the plan to be pursued for its relief.

It may be justly doubted whether any of these symptoms show themselves during the time the system is labouring under high arterial action; as in fevers of great force, or those of malignant tendency; though they are by no means incompatible with a plethoric condition of the system; or with fevers of very moderate force; a circumstance to be noticed, as it is of much practical importance.

Hysteria does not really create or produce the variety of diseases insisted on by Sydenham; the nerves of the different portions of the body, when under the *hysterical impression*, similate a disease to which the part is liable. Thus, a fit of the stone has been similated, but a stone has not been generated; diabetes has been imitated, but a genuine diabetes has not been produced; various affections arising from ossifications of the heart and large arteries, have been mimicked, but the assumption has been evanescent, &c. &c.

Therefore, as remarked above, when the nerves of certain parts of the body become affected by sympathizing with the brain when disposed to hysteria, the part thus situated will assume that peculiarity of action, which it seems agreed upon to call nervous, or hysterical, if you please.

Syncope, or a disposition to it, may be considered as a symptom of the hysterical affection, and may be looked upon, if not as one of the most dangerous forms, at least as one of the most frightful. Syncope may be regarded as a universal, but temporary paralysis of all the muscular portions of the body: this condition of the system doubtless arises from some peculiar state of

the brain; and it would most probably be in vain, even where syncope had been a habit of the system, (if we may so term it,) to recognise the peculiarity of the brain, which gave rise to them, by a post mortem search.

In epilepsy the whole of the muscular system is for awhile violently agitated, while the lymphatic and glandular systems seem to be but little disturbed: yet in hysteria, all these systems are made to participate with this condition of the brain in certain cases, while in others the glandular alone may be involved. The phenomena presented in hysteria will therefore vary, as it may be the nerves of one or of another part of the body that may be affected, as the force of the exciting cause may be more or less powerful, or as the predisposition may be greater or less.

Hysteria has been called a Proteus by Sydenham; and he declares, this disease "is not more remarkable for its frequency, than for the numerous forms under which it appears, resembling most of the distempers wherewith mankind are affected. For in whatever part of the body it be seated, it immediately produces such symptoms as are peculiar thereto; so that if the physician be not a person of judgment and penetration, he will be mistaken, and suppose such symptoms to arise from some essential disease of this or that particular part, and not from the hysteric passion." Ept. to Dr. Cole, vol. ii. p. 106.

The account of hysteria as given by Sydenham has been acceded to by almost every medical writer since his time, and its history creates a belief that this affection can really produce almost every disease to which the body is liable: hence, the various forms or disguises under which it is described.

Thus Sydenham declares the hysteric passion appears under the form of apoplexy, of epilepsy, violent pain in the head, with excessive vomiting, palpitation of the heart, a dry cough, iliac passion, pains resembling a fit of the stone, cholera morbus, swelling of the hands, fauces, shoulders, thighs and legs, pains in sound teeth, pains in the back, remarkable coldness of the surface of the body, copious discharges of limpid urine, sometimes fetid urine with acid eructations, disturbance of mind, and lowness of spirits, &c. &c.

All these symptoms, or certainly a great part of them, may by turns affect the same individuals at different periods, as predispositions exist, or as exciting causes may be applied; and this without any manifest disease in either the vascular, muscular, or lymphatic systems; or several of them may be present, when some one of these systems may be labouring under a disease of mild form. These combinations, however, as just observed, are rarely present when the arterial system is powerfully excited, as in fever; nor when the muscular system is much involved, as in general rheumatism, or in tetanus. They frequently combine

with affections of the lymphatic system; because in affections of this system, when moderate, neither the vascular nor muscular systems are much implicated; but when the glandular or lymphatic system becomes much diseased, as in the last stages of scrofula, the nervous or hysterical symptoms will disappear, should they have been present.

Sect. I.—*Of the Predisposing Causes of Hysteria.*

It seems that whatever has a tendency to destroy the general tone of the system, especially if this be done gradually, will dispose the body to hysteria; hence, the certain influence of too sedentary a life, over stimulating diet or medicines, if too long continued, long watching, disappointed hope, or abused affection, grief, terror, prolonged anxiety, &c. Some of these causes will act, by preventing the nervous system acquiring its proper tone, others by taxing its sensibility too highly, and others by exhausting or too much diminishing its energies, &c. Hence, hysteria is most frequent in females, and at that period which intervenes between puberty and the final cessation of the menses.

About the period of puberty, and for a considerable time after, the system is much more affected by the remote causes of hysteria. Before puberty, the system seems less liable to affections the remote causes of which act upon the brain and nerves, than after this state has arrived; for before this period, improper physical education, or other causes, have not generally had time to do their worst, by impairing, or interrupting the force of the muscular system; or by exalting the sensibility of the nervous. And after the menses have ceased, the nervous system has less sensibility, provided it had not, up to that period, been habitually too much excited.

There are, however, exceptions to this rule: I have seen several instances of well-developed hysteria, before the menses had made their appearance; and a number after this discharge had ceased. From all I have observed, there is no absolute connexion or sympathy between any particular condition of the uterus, and hysteria; that is, as genuine cause and effect. It is true I have repeatedly seen hysteria in its most aggravated form, attend each return of the menses in very young women; but in all such cases the particular state of the uterus, at these periods, served but as an exciting cause to this affection; for hysteria could be excited in these individuals at other times than the menstruous periods, by causes usually capable of producing it. Besides, I have seen a number of instances of genuine hysterical paroxysms in men; especially in those who have possessed great social virtues, and readily moved to strong sympathies. I do

not reckon as instances the idiotic blubbering or the unmeaning laughter of very old men.

Whytt[1] considers as "occasional causes of hysteria," &c.[2]

1st. Some morbid matter bred in the blood.

2d. The diminution or retention of some accustomed evacuation, as the menses, or hemorrhoids.

3d. The want of a sufficient quantity of blood, or of blood of a sufficient density.

As regards the first, there is much reason to doubt whether any absolute cause of disease ever *formally* exists in the blood,[3] at least we have no decided evidence of such a condition; the instances produced, purporting to illustrate or prove this assumption, can be better explained by known laws of the animal system, which do not recognise this condition of the circulating mass.

The matter of gout, as it is called, is very frequently blamed for the production of nervous complaints; but whether any such substance really exist, is much to be doubted: at all events the proofs offered of it are very equivocal and not to be relied on.

As to the second set of causes, namely, "the diminution or retention of some accustomed evacuation," they can only be considered as producing some general affection of the system with which the nervous system may sympathize; and if the predisposition is to hysteria, hysteria will show itself; if to epilepsy, epilepsy will follow, &c., but in neither of the cases can these causes act but indirectly—or, in other words, they never directly produce that peculiar condition of the nervous system which is essential to the existence of hysteria.

The third set of causes may, and we believe, sometimes does, occasion convulsions, and though every hysterical paroxysm is attended with convulsions, yet, every convulsive motion of the body is not an hysterical paroxysm. When the hysterical predisposition exists, any severe and exhausting discharge may occasionally produce the hysterical paroxysm; but not always, as the following case will show.

Mrs. ——, from an early period of her life was subject, from even slight causes, to severe hysterical paroxysms. During her pregnancies she was often attacked by this affection, and was relieved by the common remedies. In one instance she had a paroxysm during labour, but it neither deranged the economy of this process, nor required any particular treatment. After the

[1] Works, p. 551.

[2] We would rather call them predisposing causes.

[3] We do not mean by this to deny that the constituent portions of the blood may not be variously modified, and give rise to various phenomena, symptoms, or even active or chronic disease. We only object to the assumption of a superadded *something* as a cause of hysteria.

birth of the child, she was attacked with a violent and exhausting flooding, from which she was relieved only by the most active treatment. She continued very feeble for several months; but during which time she had no hysterical paroxysm; nor did any occur until she again recovered her usual health.

Sect. II.—*Of the Exciting Causes.*

The liability to attacks of hysterical paroxysms is very various in different individuals; while some have them provoked by the slightest causes, others require that they shall be either powerful, or long-continued. Instances have fallen under our observation, where the most trifling alarm, the smallest disappointment, or the slightest provocation, would almost instantly produce a "fit" of longer or shorter duration, or of greater or less violence; while, on the other hand, we have known it require the most powerful of the exciting causes to give rise to them.

They all, however, seem to act through the medium of the sensorium commune; at least this would seem to be the case with genuine hysteria; and may serve to distinguish it from several affections of the system with which it is almost constantly confounded. Thus, we see syncope, from exhaustion; from peculiar odours; from pain; from nausea, &c., confounded with hysteria, with which, perhaps, it has no necessary connexion; though it must be admitted, that the hysterical diathesis, if we may so term it, may give rise to syncope in certain cases.

Whytt[1] enumerates six different occasional or exciting causes "of nervous, hypochondriacal, and hysterical disorders," for he confounds them under one consideration: they are as follow; namely:—

1. Wind,
2. A tough phlegm,
3. Worms,

} in the stomach and bowels.

4. Aliments improper in their quantity or quality.
5. Scirrhous or other obstructions in the viscera of the lower belly.
6. Violent affections of the mind.[2]

[1] Works, p. 570.

[2] To these may be added "the inflammation of a portion of the spinal column," agreeably to Mr. Tate. Since reading his work upon this subject, we have been very attentive to the condition of the spine in affections generally termed nervous—but the result of the examinations we have made differs very materially from those laid down as constantly obtaining agreeably to Mr. T.; for of upwards of fifty spines which we have carefully examined agreeably to his rules, we have found but three cases in which the tenderness which he describes, in some portion of the spine, was sufficiently obvious to make us resort to leeching, cupping, blistering, or irritating it with the tartar emetic ointment, for its relief. It is, however, only just to say, that in these three instances the plan of treatment proved successful.

1, 2. *Wind and tough Phlegm in the Stomach and Bowels.*

One of the most common symptoms attendant upon nervous affections is the elimination of air in the stomach and bowels, when these parts are the seats of sympathy: but this phenomenon does not necessarily attend the hysterical diathesis; for these parts do not necessarily become affected by the prevalent disposition or diathesis; and when they do not, the extrication of "gas" will not take place.

But should the stomach and bowels be involved in the general diathesis, these parts may suffer great distention from flatulency. In such cases, the "wind in the stomach and bowels" is but the effect of a certain condition of these parts, and, consequently, cannot be the exciting cause of hysteria, or any other nervous affection. In what this particular condition which gives rise to the extrication of "gas" consists, it is impossible to say; but that such a disposition exists is notorious to every body.

This condition may perhaps consist of two states of these parts, altogether different from each other; one is said to be occasioned by relaxation, which suffers them to be distended by the air disengaged from the ingesta, during an imperfect digestion: hence, a "windy stomach" almost always attends dyspepsia. The other state consists, perhaps, in the secretion, or elimination of "gas" from the extremities of the vessels terminating upon the internal surface of the stomach and intestines.

We believe that the latter circumstance obtains most frequently in hysteria; the former is most common in dyspepsia; yet it is possible they may interchange. It is now some years since the belief of the "secretion of air" in various parts of the human subject was suggested; (by whom, it is not at this moment recollected,) and that the stomach and bowels appear to be more obnoxious to it than any other parts of the body. This secretion or extrication takes place under certain circumstances independently of any permanent loss of tone in these parts; and this with a suddenness that is sometimes truly astonishing. And it disappears sometimes with a celerity that is incredible. The following case is one of the most remarkable we have met with:—

Mrs. ——, aged twenty, was much subject to hysteria of a violent kind, whenever her mind was disagreeably affected. The manner in which this showed itself was very remarkable, as it seemed to be almost constantly subject to metastasis; that is, after the convulsive action had continued for some time, it would suddenly cease; she would regain possession of her senses, and would talk rationally upon any subject that might present itself. This calm, however, would last but a short time; for she would now be seized with the most violent spasms of the intestines, and of

the abdominal muscles, that can well be imagined; the abdominal muscles would be drawn backwards with such force, as to make the belly resemble that of a person who was extremely emaciated; when of a sudden, nay, almost in the twinkling of an eye, it would become distended almost to bursting; in this manner these conditions would alternate with each other, several times in the course of a few minutes; then an interval of perhaps an hour or two might take place, or even longer, if the patient were not disturbed.

There was a strong disposition to sleep, whenever the pain would abate sufficiently to permit it; and this would be enjoyed for a longer or shorter period, as she could be kept more or less quiet. Indeed, the paroxysm would almost certainly go off, if sleep could be indulged in, undisturbedly; but which was a matter of great difficulty, as the slightest noise would awake her; and the instant she was roused the spasms would return with extreme violence.

The distention of the abdomen was sometimes enormous: full as large as she ever was at the last period of utero-gestation; yet this fulness would oftentimes be removed in almost an instant, without our understanding in what manner the gas was disposed of. It was certainly not discharged by either mouth or anus; yet it was certainly dissipated by some agency or other.[1]

The spasms of the bowels, and the production of gas, would cease sometimes suddenly; the patient would then become very drowsy, nay, for awhile, lethargic; but from which she would generally awake, after a longer or shorter time, perfectly well. At other times, when the brain would become more powerfully assailed, she would have the appearance of apoplexy; the breathing would be laborious, and even stertorous; the cheeks and lips livid; convulsive twitchings of the muscles of the face; the skin cold and clammy, and the pulse depressed. Nothing relieved this state of the system but large blood-lettings; and these never failed when they were carried to a sufficient extent: indeed, the only rule we observed in drawing blood was to continue the abstraction of it until there was an abatement of these threatening symptoms.

I do not recollect a single instance of failure when the blood was freely abstracted; it has occurred that this operation was repeated; but this was constantly owing to too small a quantity being taken at first. These paroxysms, of cerebral determination, were sometimes more easily relieved than at others; that is, the loss of much less blood would answer at one time than at another.

[1] We do not wish to be understood to say that it never passed by the mouth, for it certainly did so occasionally—but it was rare: yet when it did, it was in such a continuous torrent as to suspend respiration so long as to threaten suffocation.

The loss of twenty or five-and-twenty ounces would answer sometimes, but it might require forty upon another occasion.

While the affection was confined to the stomach and bowels, nothing could exceed the severity of suffering; nor was it ever controlled by any of the usual remedies for such affections. Immense doses of anodyne, and antispasmodic medicines were given without the slightest abatement of pain; but an emetic of ipecacuanha would almost immediately put an end to the spasms.

From the uniform relief procured by emetics, it might be supposed the symptoms arose from some undigested substance in the stomach; but this was not the case; for the emetic did not bring off the remains of food previously taken, in a single instance—the discharge would consist of a small quantity of a thin watery substance, of an acid smell. I do not think, in any instance, that the quantity thrown up would exceed a pint; but no sooner was this discharged than the patient would be relieved altogether, or have but slight and distant returns of pain.

In this case the obvious remedy was an emetic; and this was constantly proposed; but singular to say, that notwithstanding the uniform and sudden relief procured by it, notwithstanding the employment of it was importunately urged in the commencement of the affection, its use was resisted with a pertinacity that could not be overcome by long-continued and severe suffering.

Sometimes this remedy was resisted until the disease shifted its ground, and the head would become the seat of the metastasis: when this took place, blood-letting, as just remarked, was the only remedy. After bleeding, it was not unusual to find this hysterical paroxysm terminate by a violent gush of tears, or by obstreperous laughter, and an immense flow of perfectly limpid urine.

It has been remarked, that during the sleepy state of this disease, the patient was easily roused; indeed, a morbid sensibility of the ear seemed to be always present: a person speaking even below the ordinary tone of voice; the moving of a chair, however cautiously; the fall of the smallest body upon the floor, which would scarcely be noticed by those around, would rouse her with alarm, and renew the spasms. These would continue sometimes for half an hour with much severity; they would then either abate, or she become so overpowered by drowsiness, that she would again relapse into sleep, from which she might again be disturbed by the slightest noise. In this way she would continue alternately sleeping and suffering, from twenty-four to eight and forty hours; or until the paroxysms seemed to wear themselves out or were interrupted by an emetic, or by a large blood-letting. I never knew the spasms to return after they had been translated from the stomach and bowels to the brain, and then producing the apoplectic condition just mentioned; for, under

this form it was always found necessary to bleed; and this never failed to relieve.

But, when merely heavy sleepiness was produced, they would be very frequently renewed, as just stated; unless she could be kept perfectly silent, which was next to an impossibility, owing to the slightness of the noise that would disturb her.

It is very common for the stomach to eructate a great deal of "gas," at the termination of an hysterical paroxysm, from which the patient finds much relief. In consequence of this, it has been supposed, that "wind" pent in the stomach was the exciting cause of the hysterical paroxysm; whereas, it is only a consequence. For this "wind" from the stomach takes place sometimes where there is not a dyspeptic state of the stomach. Dr. Cullen[1] corroborates this by saying, "Persons liable to hysteria are sometimes affected at the same time with dyspepsia." They are often, however, entirely free from it.

The relief obtained in such cases is in two ways; first, the paroxysm terminates, (most probably,) by the vessels of the stomach pouring out "gas;" as inflammation is often relieved by the vessels concerned pouring out serum. It may also be relieved in some cases, by the vessels freeing themselves of serum, and this, perhaps, of a particular quality. Whytt has recognised "a tough phlegm" in the stomach, as noticed above, as an "occasional cause" of hysteria: we, however, only contend for its presence, and its being the effect of a paroxysm. In the case above related, immediate relief was constantly experienced if an emetic were given; yet the emetic never did more than bring off a quantity of fluid mucus, of an acid smell.[2] The emetics, in these instances, most probably hastened, or aided the vessels to relieve themselves. For certain it is, this fluid could not be the cause, since it was not always evacuated; for an emetic was not always exhibited. And when the brain took up the wrong action, the paroxysm was sure to be terminated by blood-letting.

The second mode of relief is by the removal of the painful distention of the stomach; for this organ suffers extremely sometimes from "wind" confined in it; as we see when "gas" is extricated from food over which it has not sufficient control. The precise nature of the "gas" eliminated in such cases, from the extreme internal, or surface vessels of the stomach, is, per-

[1] First Lines, vol. ii. p. 256, par. 1519.

[2] It seems that hysteria is not the only disease classed under the nervous that experiences relief from the discharge of viscid matter. Whytt relates the case of "a girl aged fourteen years, who had been troubled with chorea sancti viti, who was seized with measles. A few days after her recovery she had a return of her former distemper, which, after it had continued a fortnight with little abatement, notwithstanding the use of several remedies, was entirely removed in a few days by a natural looseness, by which she voided a great deal of slimy stuff."

haps, at present impossible to say, as we do not know that any experiments have been made to ascertain it.

In the case of the lady above related, when the wind was discharged by the mouth, it would pass in so continuous a stream as to suspend respiration for a considerable time; and the quantity disengaged was so enormous as to justify us in setting it down at several gallons. We witnessed several instances of the escape of this "gas:" it had no taste to the lady, nor had it smell to the by-standers. In this latter respect, it certainly differed from the air disengaged during the process of an imperfect digestion; for the "gas" belched by dyspeptic patients smells and tastes almost always of the food from which it is liberated.

3. *Worms.*

Worms in the intestinal canal will produce, as is well known, a great variety of formidable symptoms, especially in children; such as great appetite, distention of the abdomen, cough, vomiting, tremors, convulsions, &c.; but such symptoms should not be considered as hysterical. For these events take place almost always before the hysterical diathesis is generated; nor do they, perhaps, require any particular condition of the system, like hysteria, to have them produced: it is sufficient that these animals irritate the intestines to a certain extent, to have the above train of symptoms, and sometimes many more, to present themselves.

At a period of life beyond that of childhood, these vermin may prove the exciting cause of an hysterical paroxysm where this diathesis exists; or they may be even the remote cause of this condition of the system. We have witnessed, in a lady, violent attacks of hysterical "fits," from the presence of a tape worm; which continued pretty regular in their attacks for several years. The following relation of the case may not be unacceptable.

Mrs. ——, the mother of several children, and generally enjoying good health, though of a nervous temperament, was seized, about the beginning of the year 1821, with a variety of *nervous* symptoms; such as palpitations of the heart; globus hystericus; disposition to cry, from very slight, or even no apparent cause; vertigo; ringing in the ears; headach; and large discharges of pale urine. She took a variety of remedies for these affections, by the advice of her mother, and other friends, with temporary advantage. But it was found that each of these symptoms increased in force as well as frequency, and from slighter causes than before; and, at length, a regular hysterical paroxysm, of great violence, was produced.

During a paroxysm she was bled, took asafœtida, laudanum,

&c., and was, after a few hours, restored to her usual health, which was still pretty good, though evidently on the decline, notwithstanding the employment of a number of "certain cures," for her complaint. The "fits" were now repeated from time to time, but each succeeding one appeared to acquire an increase of force and duration. Her appetite and strength now failed rapidly; she vomited a glairy tenacious substance almost every morning, which was without taste: severe pains in the abdomen, especially on the left side; her rest was much disturbed; almost constant headache, &c.

The "fits" now bore a stronger resemblance to epilepsy than to hysteria, that is; she would be seized, while walking the floor, with only an instant of warning; whereas, formerly, the "convulsion" would be preceded by the usual premonitions of hysteria. There was less struggle during the paroxysm, and some frothing at the mouth; but the duration was much shortened. She would, however, remain very feeble for several days after each attack; and be assailed by the feelings common to nervous affections.

The progress and changes stated above occupied a period of about three years: the "fits" now returned every three, four, or five weeks, without any apparent exciting cause; but these periods would be occasionally anticipated, when her mind was affected by any unlooked-for occurrence of a disagreeable kind. About this time she was advised by some friend to try strong salt and water, in pint doses, every morning, for nine mornings, for it was now believed she had a tape worm. She did so most perseveringly, notwithstanding the severe effect it produced on her stomach and bowels; and she was amply rewarded for her resolution, by the discharge of a portion of a tape worm, seven yards in length, as was supposed, for it was not measured. Her health improved very much after this, though occasionally subject to slight hysterical paroxysms, but nothing like so frequent or so severe. She has had but two for the last eighteen months, and these were light. She has since borne a fine healthy child, after an interval of seven years.

4. *Aliments improper in their Quantity or Quality.*

Almost every body has experienced the truth of the old proverb, that "what is one man's meat is another's poison;" and consequently, it will be ever found difficult to regulate diet by any prescribed quantity, or any particular quality, for they must be looked upon as relative terms. Nothing can exceed the variety of dispositions (if we may so term it) in the human stomach; it is capricious at times, in the extreme, while at others it will suffer

great abuses, and this for a long time, without resistance or complaint. Experience alone, in many instances, is the only safe guide by which the food, in either quantity or quality, can be regulated in nervous and dyspeptic patients.

It is therefore not to surprise us, that directions for the use of food in such constitutions will often prove successful, if not improper; hence, nothing is more common than peculiarities in the digestive process. Indeed the same article, and in the usual quantity, will sometimes fail to be digested, though it may generally prove very grateful to the stomach; for should this organ be in a state of sympathy, or of nervous excitement, the most familiar and commonly acceptable food may prove the exciting cause of an hysterical paroxysm. For this reason we should never fail to inquire whether any thing unusual has been taken into the stomach, when about to prescribe for an hysterical paroxysm.

I knew a lady subject to hysteria, who could tell by her feelings two or three days before, that she was about to have an attack.[1] When under this impression she was obliged to be very careful in the government of her mind, as well as cautious in her diet, for as certainly as the one was unpleasantly excited, or the other neglected, she would have an hysterical paroxysm. While, on the other hand, if she was successful in avoiding mental excitement, and did not over-tax her stomach, she would generally avoid the "fit." But it must be remarked, though she avoided a paroxysm, she was sure to be inconvenienced by headache for several days.

5. *Scirrhous or other Obstructions in the Stomach, Intestines, &c.*

Whytt[2] has taken some pains to establish the opinion, that scirrhous affections of almost any of the abdominal viscera will occasion nervous, hypochondriacal, and hysterical affections. He has given several histories of cases, with dissections, but neither of which proves the point at issue, for there is no evidence whatever that the affections developed by the knife, gave rise to the few nervous symptoms detailed in these cases. At all events there was no hysteria produced; hypochondriasis may have been; since the stomach in almost every case was much diseased.

[1] The hysterical paroxysms in this lady were periodical; the attacks though severe, were by no means frequent, yet she rarely had an attack without a warning of two or three days; or, in other words, she had occasionally certain feelings, which she knew would terminate in an hysterical "fit," if she did not studiously avoid exciting causes.

[2] Works, p. 575.

So far as our own observations have extended, we have had no reason to suspect hysteria to be produced by derangements in any of the chylopoietic viscera; these derangements, however, may, and perhaps do, augment the paroxysms, or they may perpetuate the disposition, by preventing the return of healthy action in the system, but there is strong reason to doubt of their being the remote cause of this affection.

We have repeatedly seen great derangements in the liver, spleen, stomach, intestines, and even the uterus itself, where there was the most entire exemption from hysteria. We do not, however, mean to insinuate that these two conditions may not exist in the same person; we wish merely to deny that these obstructions in themselves are causes of hysteria.

6. *Violent Affections of the Mind.*

No one can for a moment hesitate to acknowledge the influence of the mind upon the nervous system. Passions and emotions may not only prove the exciting, but they may also serve as the remote causes of hysteria. The experience of almost every body can furnish illustrations of these facts, and medical records abound with remarkable examples of them. They must, therefore, be admitted as such, though we cannot pretend to explain by what agency or by what change it is effected. Through the medium of each sense,[1] hysteria has been produced, if we credit writers upon the subject; nor does it require much credulity to believe them from what we constantly witness from a part of them.

I have a patient in whom the globus hystericus can be excited instantly, if she smell camphor. This peculiarity took its rise from a strong aversion being excited from having taken large quantities of it in a fit of severe illness. I know another, who has become a severe sufferer from hysteria from having taken an excessive dose of it by mistake. It produced mania at first, which continued for nearly three months. Before this accident, she had never betrayed the slightest disposition to any nervous affection.

Thus hysterical paroxysms have been produced by seeing others afflicted with it. The most remarkable instance of this kind is the one related by Kaau Boerhaave,[2] as having happened

[1] With the exception perhaps of the sense of taste, I have never met with an instance of hysteria produced by disgust to the palate.

[2] Kaau Boerhaave, the nephew of the celebrated Boerhaave, relates an occurrence of a very remarkable kind, as having taken place at the Harlaem hospital. A girl was brought into the ward in convulsions of a periodical kind; the convulsion was repeated the next day, which affected several who beheld her in the same

at the poor-house at Harlaem. The disease, in the first place, was excited by the operation of terror upon the sensorium commune, and it was arrested by a terror of a more violent kind, through the same medium. I knew a lady who would be thrown into an hysterical paroxysm by the sudden report of a gun. Certain odours, as noticed above, have been known to do the same, at least to produce fainting. I once saw a lady thrown into a severe "fit" by placing her hand accidentally upon the back of a cat, for which animal she had a great aversion.

Sect. III.—*Of the Phenomena of Hysteria.*

When a predisposition to hysteria exists, or the disease has been once called into activity, a great variety of causes may excite a paroxysm of greater or less force. An hysterical paroxysm, properly so called, is where the system is thrown into that violent agitation called "a fit of hysterics." A vast variety of symptoms may from time to time manifest themselves, such as palpitation of the heart, globus hystericus, large flow of limpid urine, rumbling of wind in the bowels, belchings, acid stomach, whimsical appetite, tremblings, cold feet and hands, &c.; but these are termed nervous symptoms.[1]

manner, and, in a few days more, all were affected who were in the same ward, whether they were girls or boys. This became so general as to excite great alarm; every means which experience had found useful hitherto in such affections, were tried in vain. They at length, sent for Boerhaave himself. He directed that a variety of iron implements should be heated red hot in a furnace in the ward, and be in readiness at the time these convulsions were wont to make their appearance; and ordered, that the first one that was seized with the disease, should be burnt on the arm, with a heated iron, to the bone. This so alarmed the subjects of this affection, that in an instant a stop was put to the complaint.

[1] Mr. Tate, (Treatise on Hysteria, p. 39,) says, "The next circumstance, and the most important of the whole list, whether as regards the discrimination of the disorder, or its treatment, is this—that in every case there is a distinct pain upon the application of pressure or of heat, to three or four of the six superior dorsal vertebræ. This is a point upon which I desire to fix the reader's attention; for this spinal affection, whatever its intrinsic quality, is clearly chargeable with most of the curious images and fantastic forms that hysteria is accustomed to put on; and yet, notwithstanding its constant occurrence in those forms of hysteria, and its frequent existence where there is even a *tendency* to hysteric disorder, it is a circumstance that has been overlooked by those who have professed to treat upon this subject, as well as those who, for the sake of gratifying curiosity, have published detached cases of hysteria under various other designations."

We confess this condition of the dorsal vertebræ to be, in this disease, new to us; and it may become an important item in diagnosis, if future observations confirm it. We, however, must declare, that up to this period we cannot. If pressure be made upon the dorsal vertebræ when in this pathological condition, it not only excites pain in the part, but in other parts very often, as through the chest, left side, or sometimes both, and generally oppresses the breathing.

Mr. Tate says this pain is not always equally severe; sometimes the vertebræ are very tender, at others they are less so, depending, he thinks, upon the force of the affection, but it is always present in a greater or less degree.

Sometimes the paroxysm comes on very suddenly, and is in full force in an instant; at others, there will be a number of symptoms which announce the fit to be at hand, such as headache, of a piercing kind: oppression about the præcordia; heaving of the chest; difficulty of breathing; alternate laughing and crying, &c. All these symptoms, however, may exist without being followed by a "fit;" but when they are present, it is always to be apprehended, especially when crying or laughing be of the number.

Laughing and crying are among the most remarkable symptoms of hysteria—they may alternate with each other, or they may exist separately; but whether combined, or alternate, they are almost always accompanied by an alienation of mind, which discovers itself by a rapid, incoherent, or desultory talking; and constantly dwelling upon the cause of their indisposition, if the exciting cause has been of the moral kind. At other times, the patient employs herself in singing melancholy or lugubrious airs. I have seen this last circumstance produce a wonderful effect upon the attendants of the patient. I knew a lady who sang most sweetly at all times; but when under an hysterical paroxysm, her voice, manner, and the subjects of her songs, were so touching as to dissolve all those around her into tears.

An "hysterical fit," when violent, is extremely awful; the violent and varied contortions of the body would seem to threaten dislocation of every joint; while the swollen face, the protruded tongue, the staring eyes, the gnashing teeth, the appalling scream, render the whole scene one of great horror. Sometimes the hair is deracinated by handfuls; the chest is beaten by the clenched fist, with threatening violence; while the whole muscular system, when thrown into action, is endowed with a strength that bids defiance to all attempts at restraint.

The sphincter ani, like the other muscles of the body, participates in this unnatural state of action; for it is found contracted so firmly sometimes, as to prevent the introduction of the pipe of a small syringe.[1] The abdominal muscles also are violently contracted sometimes during the fit, and especially about its central portion, the navel.

Dr. Cullen says, and it entirely agrees with our experience, that this disease "more especially affects the females of the most exquisitely sanguine and plethoric habits, and frequently affects those of the most robust and masculine constitution; but it is not confined to such; for the nervous and irritable are also liable to this affection. By the nervous and irritable we understand, such constitutions as are affected, or easily moved, by slight exciting causes. This condition of the system may be either constitutional or acquired. Improper physical education will render

[1] Cullen.

almost any constitution nervous or irritable, if it be continued sufficiently long; hence, those who indulge in habits of idleness, too high living, lying in bed too much, night watching, &c. &c., are almost sure to possess this peculiarity; or this peculiar condition may exist as an original state of stamina.[1]

Under such circumstances, hysteria will almost certainly be generated, if the exciting causes be applied; and hence it is, that delicate females are more liable to it than robust women or men; and hence women of this constitution are almost sure to be affected with nervous tremblings, palpitation of the heart, syncope, &c.; though otherwise enjoying very good health. In such, also, may readily be excited hysterical paroxysms, or convulsions; for either the active passions, or emotions of the mind, as anger, revenge, jealousy, and even surprise; or the passive ones, as fear, grief, or disappointed hope, will oftentimes, in a moment, have this effect.

Disease may produce this state of the nervous system in constitutions not previously disposed to this condition; hence, we sometimes see hysteria follow recoveries from long-protracted illnesses; especially in females. In such cases, there does not appear to be any increase of nervous sensibility; it is rather an altered condition of the nervous system; as it now becomes obnoxious to causes which would not previously have affected them. Hence, the wonderful effects of certain odours, medicines, or even sounds, in such a condition of nervous peculiarity. I have known two or three instances where the smell of the tuberose, the lily, or the lilac, has been followed by faintness and palpitation of the heart; though previously to the illness they had no such tendency.[2] I have known the very name of rhubarb, and of the Peruvian bark, excite the most violent disgust, and sickness of stomach. I know a gentleman who cannot

[1] Mr. Tate mentions another symptom which he thinks goes far to distinguish or characterize hysteria—it is an acute pain in the left side just below the left breast, and about the fifth or sixth rib,—it is very circumscribed in extent, but is extremely acute. This affection, as one of the characters of hysteria, is also new to us, though we have frequently noticed the symptom. In one or two instances it has been of great severity, but in neither were the patients subject to any obvious form of hysteria. In both of the cases in which we had occasion to prescribe for this affection, the pain was constantly removed by rubefacients applied immediately to the spot.

Mr. Tate thinks that this pain has frequently produced the lateral curvature of the spine, as it is sometimes of very long continuance, and the patient with a view to its relief constantly leans towards the affected side.

[2] Dr. Whytt details several similar instances from this kind of change in the nervous system; he says, "Thus, several delicate women, who could easily bear the stronger smell of tobacco, have been thrown into fits by musk, ambergris, or a pale rose." "The smell of cheese has almost always occasioned the bleeding of the nose in some."[3] Works, p. 543.

[3] Kraau Boerhaave.

drink a glass of any of the white wines, though formerly fond of them, in consequence of having frequently been puked with antimonial wine during a tedious fever. Mr. Boyle, (Usefulness of Experimental Philosophy,) tells us of a gentleman who could be more violently puked by coffee than by crocus metallorum, or other strong emetics; and was made sick constantly by its smell; though he formerly drank it without the slightest inconvenience. I knew a lady, after recovery from a protracted typhus, agonized by the sound of distant thunder; she was less affected when it was near and violent. And Boyle, (Usefulness of Experimental Philosophy,) also relates the case of a lady, who upon hearing the sound of a bell, or any loud noise, would swoon so deeply as scarcely to be distinguished from death.

Those who have the misfortune to labour under this idiosyncracy of nerve are peculiarly unfortunate; as they are constantly liable to be affected by causes which have not the slightest influence on others; and to such become, but too often, the object of cruel and ill-directed ridicule. Because affections of this kind do not often kill; and because the subject of them very often enjoys otherwise very good health, it is with too much facility supposed that every ill of which they complain is but the imaginings of a distempered brain.

Sect. IV.—*Diagnosis of Hysteria.*

Sydenham, and some others, think the analogy between hysteria in women, and hypochondriasis in men, is so strong, as to consider them as one and the same complaint; but this is certainly not the case. Hoffman looks upon them as distinct diseases; and Cullen strongly inclines to the same opinion; at least he arranges them under different genera. He places hypochondriasis in the class of Neurosis, and the order Adynamiæ; and hysteria, in the same class, under the order Spasmi.

It is not a little surprising, that Sydenham, one so proverbial for accuracy, should have confounded these diseases; especially as their respective characters are pretty strongly marked. 1st. The subjects of attack are by no means the same, as far as temperament will constitute a difference; for we have noticed that hysteria is most common to women, and those of a sanguine and plethoric constitution; whereas, hypochondriasis has more frequently men of a melancholy temperament for its objects. 2d. Hysteria is relieved very often as life advances; whereas the other is almost always aggravated. 3d. The pathognomonics of hysteria, as Dr. Good very justly observes, such as, "the convulsive struggling paroxysms, the sense of a suffocating ball in the throat, the fickleness of temper, and the copious and limpid urine,

have no necessary connexion with hypochondriasis, and are never found in this disease, when strictly simple and idiopathic. While, on the contrary, the sad and sullen countenance, the dejected spirits, and gloomy ideas, that characteristically mark hypochondriasis, have as little necessary connexion with hysteria, and are in direct opposition to its ordinary course." Vol. iii. p. 353. An attention to these marks will serve to discriminate the two diseases perfectly.

Sect. V.—*Treatment.*

The whole history of hysteria shows that the nerves of certain parts of the body are more liable than others to that particular state which gives rise to its phenomena; and that this condition of the nervous power declares itself almost always in certain portions of the system. This condition seems to have an election, if we may so term it; or, in other words, certain parts more constantly sympathize with the brain, and become more liable, or more easily involved, than others.

It is true, Hoffman locates hysteria in the stomach; nor is this difficult to understand; since, in severe stages of this affection the stomach is very apt to be deranged; but this is only the effect of this certain or hysterical, (if we may so term it,) condition of the brain. For there have been many instances of hysteria, and some of which I have witnessed, where the stomach was in a most perfect state of health; and I have seen cases of great derangement of this organ, where no hysterical symptoms have attended.

Doubtless the stomach, like any other organ of the body, may be a seat of hysterical sympathy: in this case we shall have a variety of gastric symptoms, which will vary in force, as well as in character, according to the state of predisposition and power of the exciting cause. But when this occurs, the nature of the affection will almost always betray itself by the presence of some other symptoms which may be considered as pathognomonic of hysteria; such as palpitation of the heart; a sense of coldness on the top of the head; an increased flow of urine, &c. But should neither of these symptoms declare itself, we are pretty certain that the gastric affection is of an idiopathic nature, and may very often be justly named dyspeptic.

The same observations will apply when the derangement shall be in the bowels, or some one of the abdominal viscera; hence, the importance of attending to this distinction, in all affections of these parts. For when this organ is labouring under an active malady, as inflammation, there is for the most part an exemption from the symptoms constituting hysteria; consequently, for the

production of this, a peculiar condition of the nerves of the part seems to be always required.

On the presence of the affections just alluded to, and now about to be more particularly mentioned, we may almost always detect the existence of this condition of portions of the nervous system, and determine the extent of their agency, either in modifying or giving rise to new phenomena in the other systems of the body. Thus, palpitation of the heart, large discharges of limpid urine, a ball rising in the throat, a sense of coldness on the top, or back part of the head, with a disposition to cry or laugh, will always point out the peculiar disposition of the nerves concerned in the functions of the various parts just enumerated; and it can be pretty certainly determined by the state of the vascular system, how far they must be considered as the cause or the effect of existing symptoms.

In a practical point of view, an attention to the above suggestions is of the utmost consequence—for certainly it is not too much to affirm, in very many instances, that that practice cannot be successful which throws out of sight this condition of the vascular system. In every affection of the body the state of the blood vessels should constantly be kept in view; for on this our success will very much depend, when treating affections in which hysterical phenomena are present; for it will almost certainly point out whether the nervous or vascular system is most to be attended to, and in what succession.

There are few errors more common in practice, than that of treating *nervous symptoms* independently of the circulatory system; and hence, the too often want of success of the common remedies when administered without attention being paid to it. The constant belief, that blood-letting, or any other depletion, is injurious in nervous diseases, has very often prevented the success of the best remedies; and consequently, has caused a disease to be protracted and obstinate, which would have yielded almost instantly to the common agents, had their administration been preceded by the loss of a few ounces of blood, or even, perhaps, by a brisk cathartic.

However ill depletion may agree with nervous constitutions under a want of excitement in the vascular system, it is nevertheless indispensable, when hysterical symptoms are accompanied by an exalted arterial action; and it should therefore always be premised. Whoever expects to be successful in the treatment of nervous patients without paying attention to the state of the pulse, will find himself constantly disappointed; and the application of such medicines as are known to exert an influence upon the nervous system, will be sure to be unsuccessful, if not mischievous.

Who has not witnessed the want of success of opium, camphor,

asafœtida, &c., in an hysterical paroxysm, because attention had not been paid to the circulatory system? Yet after the loss of a few ounces of blood, they have often been rendered immediately efficient. The connexion between the nervous and arterial systems is more intimate than is generally admitted; and, to be successful in prescribing for derangements of the former, we must have a scrupulous regard to the state of the latter.

Indeed, a case can scarcely occur, in which it would be safe to disregard the state of the circulation altogether in the treatment of nervous affections; for though it may not be labouring under any undue excitement at the moment, yet it may be very easily roused into morbid action by the undue application of stimuli. For the force of stimuli must be regulated by the susceptibility of the vascular system to action, if success is to follow their exhibition—thus, ten or fifteen drops of laudanum, under certain conditions of the system, may be more successful than three times this quantity under another state of arterial action; and the same observation will apply to many other remedies employed in nervous affections; for the success of remedies must depend upon their being administered in due force, to the existing condition of the system.

It is every way certain that plethora will often give rise to a train of nervous symptoms, or to hysteria: now these cases, if treated from the commencement by stimulants, or antispasmodics, will surely be aggravated; while the abstraction of a few ounces of blood will almost instantly tranquillize the system, and render farther applications perhaps unnecessary. It will be well to illustrate this by a case.

Mrs. B., aged thirty years, three months pregnant with her fifth child, complained of great palpitation of the heart; lowness of spirits; head felt as if girded by a cord; easily provoked to tears, hands and feet cold, with very frequent discharges of urine; loss of appetite; nausea, and occasionally vomiting: pulse full and tense. She was ordered to lose ten ounces of blood; and to take a dose of rhubarb and magnesia. She was immediately bled; and so effectual was the relief from it that she did not think it necessary to take the purgative medicine.

Had this case been treated with stimulants, or antispasmodics, there is no doubt that every symptom would have been aggravated; at all events they would not have been relieved.

I do not, however, mean to insinuate that every case attended with the above enumerated symptoms would be relieved by the loss of blood. I wish merely to inculcate the necessity of ascertaining the state of the arterial system, before a prescription is made for what is familiarly termed nervous symptoms; and if this be found too active, it must be reduced before stimulants and antispasmodics are administered. It is also important to be

mindful of the state of the circulation during the use of active remedies; for it may happen, nay, it very often does, that during the exhibition of them the pulse becomes too much excited, and all the nervous symptoms become aggravated.

To relieve this condition it is but too common a practice to increase the doses of the stimulants in use; which, instead of producing the desired effect, but augment the difficulty. In such cases the loss of a few ounces of blood; a brisk purge; a suspension of the remedies; or even, sometimes, a reduction of the quantity, will have the happiest result.

In the treatment, therefore, of hysterical or nervous affections, too much latitude is commonly given to patients; than which nothing can be more erroneous. It is generally supposed by them, that if a small dose will do good, a larger will do better; or, at all events, a quick repetition of it is every way necessary: they accordingly act upon this principle; and, but too often, to their injury. For, however proper these remedies may be, they can only be so certainly in appropriate doses; if these be exceeded, either no relief will be obtained, or the complaint will be increased. It should, therefore, ever be a rule in practice, even in nervous diseases, to suit the force of the remedy to the state of the system, as far as this may be practicable.

It will be acknowledged, almost upon all hands, that this important point has been too much neglected; hence the but too frequent failure of remedies in the diseases in question.

Dr. Whytt,[1] when about to lay down the cure for "nervous disorders," makes use of the following judicious language: "It will be proper to observe, that, as it is generally in the power of medicine to relieve, it is frequently beyond the power of art to eradicate the disorders we now treat of; and, therefore, it may be often of use to intimate this to our patients, especially to such as have fortitude enough to bear those evils which can neither be wholly prevented nor fully cured. It is farther necessary to acquaint every patient, that without a long perseverance in a course of medicines, diet, and exercise, no great or lasting benefit can be expected." To this purpose is the following passage of Montanus, which equally deserves the attention of such patients as are affected with nervous ailments, and of the physicians who undertake their cure. "In curatione *hujus morbi*, (sciz. hypochondriaci,) non licet præfinire tempus mensis unius aut anni, sicut in aliis contingat; sed oportet in toto vitæ suæ tempore curationi operam dare interdum curationi, interdum præservationi, attendo."

Hysteria is seldom cured so effectually as that the patient shall have no farther returns of it, should an exciting cause be

[1] Works, p. 632.

applied; yet we know from ample experience that it can be much mitigated by proper moral and medical discipline. Too much, we believe, has been taken for granted by medical men upon the subject of this disease; for it seems to be admitted, and this with by far too much facility, that little or nothing can be done for hysterical patients beyond the temporary relief of the paroxysm. This indifference upon the subject of hysteria has prevented sufficient inquiry into the nature and causes of this formidable disease; and the modes of treating it remain very much the same as they did in the time of Sydenham.

The difficulties experienced in the treatment of this complaint appear to us to be rather accidental than essential; and this belief is founded on the following well established facts: namely, first, we now and then see females, who have been subject to it at one period of their lives, exempt from it at another; secondly, care taken to avoid the exciting cause will, for many years together, prevent the return of the paroxysms. Now, it would seem, that if this affection can be removed, or even considerably relieved, either by means which we do not exactly understand, by the proper exercise of moral restraints, or by the removal of certain exciting causes, we might be encouraged to hope that the proper application of means, when the pathology of the disease shall be better understood, might be successful. But if hysteria be always looked upon as one of the opprobria medicorum, it cannot be expected we shall ever be much better acquainted with its nature or method of cure.

It is ever proper that the medical man should hold the opinion that every disease is susceptible of cure; for this belief will stimulate him to investigations which may result in success; but if he permit himself to think that certain diseases are without remedy, exertion will be paralyzed, and inquiry will cease. The lues venerea, intermittents, and doubtless many other diseases, were, at different periods of the world, thought to be incurable, however easy of subjection they may be at the present day.

The following cases will show that this formidable complaint may be subdued by moral and physical causes.

Case First.

Mrs. ——, of sanguine temperament, married early in life, and became the mother of a large healthy family. She herself enjoyed uninterrupted good health, until her previous habits were broken up by her husband becoming very rich from successful speculations. She was now under no necessity of *working* for the sake of her family; every thing that money could purchase was at her command. She occupied a large house; employed

a number of servants; and performed in a carriage that which was before done on foot. She fed high, and became really luxurious. But this change of fortune had penalties; and they were severe ones; she soon became very corpulent, listless, and extremely nervous. She was frequently assailed by hysterical paroxysms of great severity, and of long duration. She became peevish to all around her, and extremely jealous of her husband. Every action of his life was misinterpreted, though he was one of the best and most moral men in the world; and frequently did her "fits" arise from this overweening anxiety of her husband's supposed bad conduct.

She continued in this fretful and anxious state for a number of years; and became so debilitated at last, that she could not leave her chamber for months together; and it was thought by her medical attendants she must soon sink under her malady. But at this time the scene of prosperity was, by one of those changes common to mercantile life, suddenly changed for that of comparative poverty. Her husband gave all his effects to his creditors; and after satisfying them, little remained. The effect of this reverse upon the disease of the lady was no less sudden than salutary; and that which it was thought would cause her death proved her cure. For from this moment she discharged her servants; gave up her coach; dismissed her physicians; reinstated herself in her former occupations, and re-assumed her former habits, as far as her state of health would at the moment permit.

In consequence of this change of circumstances, her moral energies were roused, and she quickly showed to the world that her temporary elevation had not unfitted her for a profitable return to her former habits: and by exercising them, she soon regained that health which had been so completely sacrificed at the shrine of wealth; for after the first shock was over, she never had an hysterical paroxysm.

Case Second.

A lady, born in a northern climate of Europe, went with her husband, after being the mother of three children, to one of the West India Islands. Here her health soon suffered from the climate; she had frequent abortions, by which she was much reduced by the attending hemorrhages. She became very hysterical; and paroxysms would be produced by the slightest causes. Her physicians advised she should be taken to a northern climate; and she arrived in Philadelphia in a most reduced state.

She would not unfrequently have three or four "fits" in a week, for some time after her arrival. She had aborted a few weeks before, and was still labouring under a coloured discharge

from the vagina. The usual tonics were administered with advantage, and she soon acquired an addition of strength; the uterine discharge was arrested, and the hysterical paroxysms were diminished both in force and frequency. The first object in view was the renewal of strength; and the second to prevent impregnation, while she continued so feeble, as had been the case too often before.

The husband had business in Europe; and we begged him to hasten his departure, or exercise forbearance; for which we candidly gave our reasons. He went; and his wife improved daily under the use of the cold bath, air, exercise, and a strictly regulated diet, both as to quantity and quality. Her strength improved daily; her appetite increased; her digestion was well performed; and her alvine excretions regular. She would now be weeks together free from hysterical attacks; and by pursuing this plan regularly for fourteen months she lost them altogether; for she has had no return up to this moment, a period of several years.

Her husband returned after an absence of eighteen months, and she has since had two live born children. In consequence of her improved health in this climate, she has been permitted to remain. These cases show that established hysterical paroxysms with their attendants, were subdued by changes of a moral and physical kind; and that they hold out encouragement to treat this affection as one capable of cure. But we must repeat, that success can only be expected, where the patient will most sedulously co-operate with the exertions of the physician.

The treatment of hysteria will embrace what is proper to be done during the paroxysms, and what may be necessary in the intervals.

1. *Of the Paroxysms.*

The management of the paroxysms is oftentimes one of great difficulty, from the excessive force with which it agitates the body. The whole muscular system is violently exercised, and this to a degree that almost exceeds belief, even in women who are at other times very feeble. The circulatory system is almost always excited, and a strong determination to the head is declared by the suffused cheeks, the swollen face, the blood-shotten, protruding eye, the distended jugulars, the throbbing carotids, and the never-failing but temporary mental alienation.

Notwithstanding these strong evidences of the determination of blood to the head, many practitioners doubt the propriety of blood-letting in hysteria, because they declare it to be a "nervous disease, and that drawing blood is always injurious in such cases."

Such sweeping declarations must necessarily be very often wrong, and tend too decidedly to retard improvement in the practice of medicine, since they are almost always based upon narrow or imperfect views of the animal system. They should, therefore, always be received with hesitation, and acted upon with caution. We have remarked above, that this prejudice against blood-letting, (for it deserves no better name,) has retarded the cure of many of the affections termed nervous: this apprehension should therefore be laid aside, and more reliance placed upon the state of the circulating system. The pulse should constantly be the guide upon all such occasions, and if this be properly studied and well understood, it will always direct us safely in the employment or the withholding of the lancet.

The condition of the system during an hysterical paroxysm is almost always one of high excitement; nor will this surprise us, when we reflect upon the period of life, the kind of temperament, the nature of the exciting causes, and the importance of the parts principally concerned in the disease. Besides these general reasons, which are of no small force, we shall find one still more powerful in the pulse itself. It will almost always be found rapid, full, and tense, and most unequivocally declaring a necessity for abstracting blood, and sometimes even to a large amount.

We, therefore, with very few exceptions, direct the loss of blood to an extent that shall decidedly diminish the force of the pulse, before we employ any other remedy. Bleeding does not often put an end to the fit immediately, nor is this expected of it; it, however, lays the foundation for other remedies to be successful, which would not be the case without it. Nor is this all: it always, we believe, shortens the "fit;" and certainly very often prevents its becoming protracted, or ending in mischievous engorgements.

After bleeding we can employ remedies agreeably to the presenting indications with much more certainty and safety. We should inquire into the nature of the exciting cause, and be much directed by its nature. It may be owing to a passion, or an emotion of the mind; if this be so, sedatives and antispasmodics should be given. These may be administered by the mouth or by the rectum, as may be most expedient. If the patient can be made to swallow, and it rarely happens that she cannot, if advantage be taken of an interval, laudanum, in a full dose, should be given, and may be repeated in an hour, half an hour, or more seldom, as necessity may require. It may be combined with a solution or the tincture of asafœtida, in drachm doses. Cold water may be freely dashed upon the face, or even a stream of it turned upon it.

Dr. Whytt, (Works, p. 693,) after enumerating a number of

remedies thought to be useful in the paroxysm, winds up with the following declaration: "But there is no remedy which I have found so effectual in removing hysterical faintings, with convulsions, as the warm *pediluvium;* for after many other things had been tried to no purpose, I have seen the patients restored to their senses almost instantly, by putting their feet and legs in water a little more than blood warm. And it was remarkable, that upon the discontinuing the *pediluvium* too soon, the faintings and catchings often returned in a less degree, and the pulse became smaller and irregular. In a few cases, where the patients were plethoric, and the convulsions very strong, the *pediluvium* has failed."

Of this remedy in the convulsive stage of hysteria we can say nothing from our own experience, but the authority of Dr. Whytt is sufficient to produce reliance on it. The only objection we perceive in the use of the *pediluvium* is the difficulty of its application at the moment the patient is convulsive—flannels, or a blanket wrung out of hot water and applied to the legs might answer. His last observation on the cause of the failure of this remedy, is worthy of remark, namely, but "where the patients were plethoric, it failed:" this clearly points out the necessity of that strict attention we have recommended to the state of the pulse.

It is recommended by almost all writers, and certainly practised by all by-standers, to hold volatiles, and other stimulating things or substances to the nostrils during the "fit."[1] This is certainly a very doubtful practice where the system is much excited, and the convulsions violent. It is applying a powerful stimulus to a very sensitive part, a part that very powerfully sympathizes with the brain, and most probably the brain with it, at a time when the abstraction of stimuli is highly desirable. This practice most probably arose from the success of such substances in syncope; but between syncope and an hysterical convulsion there is not the slightest analogy: in one instance, the muscular, the arterial, and nervous systems are violently excited; in the other, they are, for the time being, paralyzed.

At a very early period of our medical practice, the propriety of this plan was doubted: this arose from seeing a person in an hysterical paroxysm constantly thrown into a convulsion by the

[1] Dr. Whytt recommends the employment of such substances during the fit, and says, "These medicines, by the strong and sudden impression they make on the very sensible nerves of the nose, not only tend to excite the several organs into action, but to lessen and destroy the disagreeable sensation in that part of the body which brought on the fit." Works, p. 692, 693. But a little while after we find him at variance with himself, by saying, that "warm water is not only the speediest, but the safest cure for hysteric faintings; while strong volatiles, held to the nose, are apt to throw some delicate women into more violent convulsions," p. 693.

application of the volatile spirit of hartshorn to the nose, while she lay in a state of comparative tranquillity after an exhausting "fit." In this instance, the volatile was no sooner applied than the convulsion was renewed: the practice was peremptorily forbidden, and the patient soon "came out of the fit." Since that period we have never permitted the employment of volatiles in an hysterical paroxysm; and so far we have been perfectly satisfied with the plan.

Should the patient be unable to swallow, we direct the laudanum and asafœtida to be given by "injection," having the bowels previously emptied by one consisting of a pint of warm water and a large table-spoonful of common salt. The anodyne and antispasmodic enema is to consist of two wine-glassfuls of lukewarm water, a full drachm of laudanum, and as much tincture of asafœtida, or if the watery solution of the asafœtida be at hand, it may be used instead of the plain water. This injection may be repeated pro re nata, every hour or two, as the exigency may demand.

It is sometimes difficult to administer an enema during the "fit," for we have remarked that the struggle during this time is severe and irresistible; besides there is another difficulty to this process, which arises from the contracted condition of the sphincter ani, but this can always be overcome by perseverance and address, so far as we have yet witnessed; it should not therefore be abandoned too soon, if the patient cannot swallow. See p. 480.

Hysterical paroxysms sometimes depend upon something taken into the stomach, as too large a quantity of indigestible food, &c. When this is ascertained to be the case, an emetic should immediately follow the bleeding, if this has been judged necessary. Sydenham recommended this practice long since, and the experience of almost every body since his time has confirmed its efficacy. Sometimes severe vomiting attends the paroxysm: when this is the case, it should be encouraged by warm water when practicable, until it appears that the stomach is cleansed. This case, agreeably to Sydenham, requires a larger dose of laudanum than where no vomiting attends.

If there be much costiveness, besides the injection of salt and water, a strong infusion of senna should be given, in such doses as the patient can be made to swallow, and at such intervals as shall be judged necessary, until it operate freely.[1]

It sometimes becomes necessary to apply blisters to the calves of the legs, or sinapisms to the feet; these are, however, only

[1] The senna seems to be peculiarly appropriate in this case, for its griping has sometimes advantages not to be derived from other cathartics. This is especially the case when the convulsions are frequent, and when attended by strong evidences of determination to the head.

useful where there is a disposition to coma after the convulsions have ceased.[1]

The paroxysms are of longer or shorter duration; and it is not unusual to find the patient, after a severe "fit," rouse up, as if little or nothing had happened: when this is the case, the disease is habitual, for the most part, and not of much force. At other times they appear to fall into a profound sleep after each struggle; and if now let alone, they would awake perfectly well. But if anxiety has put in practice the application of volatile substances to the nostrils, it may do mischief, by renewing the convulsions, as stated above. Therefore, when this condition occurs, it should not be interrupted by improper officiousness; for this state of tranquillity is the best possible thing for the patient.

When the patient has warning of an approaching paroxysm, it may frequently be interrupted by a timely dose of laudanum, asafœtida, or Hoffman's anodyne liquor; or what we have frequently found to answer well in such cases, is equal parts of the volatile tincture of valerian and castor, in drachm doses, mixed in sweetened water, provided much headache does not attend; for if this be the case, the paroxysm can only be put aside, or moderated, by a bleeding, followed by a brisk cathartic. A patient of ours rarely fails to prevent a "fit" by this plan.[2]

In no disease, perhaps, has so many remedies been employed, as in hysteria; at least, during the paroxysm: almost all the strong-smelling plants, oils, gums, and chemical products, have been employed, and lauded, condemned, and laid aside, in their turn. In this, perhaps, we have lost nothing; for had they possessed any remarkable advantages over the asafœtida, (almost the only one now employed,) they would unquestionably have been retained as certainly as it has been. Indeed, we are disposed to believe that they would never have been introduced among the anti-hysterical medicines, but from their strong smell exciting an analogy to the asafœtida, which has ever merited some confidence in hysteria.

Dr. Hamilton believing the disease to be seated in the stomach

[1] Mr. Tate, in conformity with his pathological views, (see note at page 479,) declares he has seen the most decided beneficial effects from the use of the tartar emetic ointment, rubbed upon the dorsal vertebræ until it produces vesication.

[2] Patients afflicted with hysteria frequently experience sensations which warn them that a paroxysm is at hand, and waiting only for an exciting cause to call it into play—under such impressions relief or prevention is sought, in various ways, by different individuals. Some seek cheerful company and amusements, others active occupation; some let blood, others stimulate, &c.; and all, as is often in their power, after they have become well acquainted with their malady, shun well-known exciting causes. A lady with whom we are well acquainted, and who is well versed in the premonitory symptoms of hysteria, will not, while labouring under these sensations, open a letter of any kind addressed to her. They are thrown aside, until she feels she may encounter with impunity any information they may contain.

and bowels, gives, with his usual freedom, purgative medicines; the good effects of which, on this presumption, he illustrates by several cases. But these cases prove nothing in favour of his pathology; since purging is but a mode of depletion; and one which is as familiarly employed for affections of the brain as for those of the abdominal viscera. In young, robust and healthy women, and especially those in whom the disease has not yet assumed a chronic form, we have always found purging highly useful, and never fail to employ some of the most active of the class for this purpose; such as senna, calomel and jalap, various combinations of gamboge, scammony, &c.

Hysterical paroxysms may be excited by a variety of causes, and especially those which act directly upon the mind; and when these cannot absolutely be removed, the consequences may frequently be diminished by the repeated use of opium. The cases in which laughing, crying, a sense of suffocation, palpitation of the heart, and mental alienation, without convulsions, occur, can almost always be restrained by the liberal use of this drug; provided no plethora exist, or after it may have been removed by a bleeding.

The following case will serve as one of many, as an illustration. Mrs. ——, hearing suddenly of the death of a brother, to whom she was much attached, and whom she for some days had hourly expected to see, was instantly seized with such an alienation of mind, as to pervert the kind offices of her best friends into attempts to injure her. She talked incessantly of her brother; cried and laughed by turns; complained she was strangling, and required air, &c. We persuaded her to take a little coffee, in which was mixed thirty-five drops of "black drop:" this was repeated once an hour for four doses. She now became calm; was unconscious of any thing that had happened, and fell into a sound sleep, which lasted twelve hours. She awoke from this state perfectly restored.

The best form for exhibiting opium is in that form of laudanum called the "black drop," or the tinct. thebaic. acetat.[1] In this form it rarely leaves behind the unpleasant feelings the common laudanum does. It is of about double the strength of the common laudanum.

But should this preparation not be at hand, the common laudanum should be mixed with two tea-spoonsful of sweetened vinegar, which answers nearly the same purpose. In the use of

[1] We may give the new preparation of opium, called the "denarcotized laudanum," with still greater impunity, as it more rarely offends than the black drop. If this preparation be made choice of, it should be given in as large doses as if the common laudanum were employed. Or with equal, if not greater advantage, the sulphate of morphia—a grain of which is about equal to one hundred and twenty drops of laudanum.

this medicine strict attention should be paid to the peculiarities of the system as regards opium. There are many who cannot use the smallest quantity when given in one form, yet can bear full doses when exhibited in certain other forms; for instance, we know several who cannot take the common laudanum in any quantity, yet can use the black drop with freedom and without the slightest inconvenience; others can take the laudanum, when mixed with a few grains of the carbonate of potash, or of soda: others can only use the solid opium; and some few we have met with, who cannot use the black drop, yet will bear the common laudanum well, &c. &c. Attention should always be paid to such peculiarities, when they exist; for, on them, very often, much will depend. Dr. Whytt gives a remarkable instance of this kind of idiosyncrasy. A middle-aged lady whom four or five drops of laudanum, taken by the mouth, affected with a violent pain and cramp in her stomach; and sixteen drops taken in a clyster, though they did not occasion these complaints, made her delirious for twelve hours." Works, p. 645. We have seen several instances in which the "black-drop" invariably gave colic.

This peculiarity, as regards opium, is oftentimes very unfortunate, as it deprives the patient of the use of the only remedy capable of relieving the existing symptoms. We have two patients, much subject to cough; neither of whom can bear opium in any form we have been able to invent. One of them dare not use it even externally. In constitutions thus peculiarly constituted it might be well to follow the suggestions of Whytt upon this subject. He observes, that the lady, (whose case has just been related,) "having afterwards begun with *one drop of laudanum*, gradually raised it to twenty-five drops; nay, she has sometimes taken that quantity thrice a day, without feeling any of its former bad effects;" which would seem to declare, that this unfortunate peculiarity might be overcome by beginning with very small doses, and gradually, and almost insensibly, increasing them.

When the hysterical paroxysm precedes the eruption of the menses, it is generally best relieved by camphor, or camphor and opium conjoined: this may be given in julep, or in powder, as may be most convenient. The following formula we have found to answer very well—

℞. Gum camph. - - ʒij.
Sp. vin. rect. - - q. s. f. pulv. adde
Pulv. g. Arab. - - ʒij.
Tinct. thebaic. acetat. - gut. lx.
Sacch. alb. - - ʒiij.
Aq. Font. - - ʒvj.—M

Of this, a table-spoonful may be taken every hour or two, as the case may be more or less urgent.

In cases where it is known that opium in almost any shape

or quantity will disagree, it may be omitted, and the simple camphorated julep used in its stead. But it should be well ascertained that the system does not require lowering by blood-letting before even the camphor is given: for, should the pulse be too active, much less advantage will be obtained from it; and it will render the exhibition of opium altogether improper.

Local applications are sometimes of advantage in such cases, especially if the feet be cold—pediluvium, as warm as can be well borne, will be found highly serviceable, according to Whytt; and we know, that sinapisms to the feet, and warm dry applications to the region of the uterus, are of much benefit.

It is almost the universal practice of the attendants on a person in the "hysterics," to oppose by violence, as far as their strength will enable them, every motion of the patient's body. They suppose the hands must be unclenched, at all events; and very often, in the performance of this work of supererogation, much injury is sustained by the muscles that flex the hand and fore-arm. This violence should be reprobated, as it is highly improper; especially as it is every way calculated to do mischief, and never to do good. The patient may be suffered to grasp the hand of some one, as the spasms approach; but if the hand be contracted, it should be suffered to remain so, until it becomes relaxed.

All that is useful in such cases is to make such opposition to the patient's struggles as will prevent doing herself mischief, by striking herself too forcibly; or by bruising her limbs against any hard body that may be in the way; or throwing herself from the bed. Again, a solid metal body is thrust into the mouth, such as the handle of an iron, pewter, or silver spoon, to prevent injury being done to the tongue; but all such substances are improper, as they frequently do much injury to the teeth. A piece of cedar or pine, of sufficient length, and shaped like a wedge, may be advantageously employed.

After the struggling is over, the patient will sometimes be very sick at stomach, or even vomit violently: in such case nothing is better than a draught of water, as warm as can well be swallowed; and this may be repeated whenever the necessity recurs. We should not attempt to force medicines upon the patient while the stomach is thus disordered.

In a late conversation with my friend Dr. Jackson, I learned from him, that he had found cold water highly serviceable in hysteria of a certain character: he has kindly furnished me with his views upon this subject, and I shall, I am sure, be rendering an acceptable service by inserting his letter entire.

"My dear sir,

"In your note last evening, you requested me to inform you more particularly of the employment of cold water in hys-

teria, which I mentioned, in conversation a few days past, I had found a prompt and beneficial remedy, in some cases of that affection. In compliance with your desire, I present you with the following observations, and shall be pleased to find you should consider them as meriting your attention.

"I was first led to the practice from observing some cases of spasmodic or convulsive movements of the voluntary muscles, in robust men, but having a nervous temperament, and which were excited by a high degree of gastric irritation. In some, the accidents were attributed to drinking cold water whilst over-heated. But irritants of various kinds, as indigestible food, alcoholic liquors, &c., had also been taken: and the symptoms revealed, when attentively examined, an intense irritation of the stomach. In these cases, the convulsive agitation of the muscular system was unattended with any tendency to coma or stupor; the patients were unable to express, in language, their feelings; they were conscious of every thing doing about them; their attention was wholly riveted on their sensations; and when relieved they accused the stomach and head as the seats of their sufferings. The convulsive movements of the voluntary muscles were evidently the result of the gastric irritation, forcing the will, and reflected, without its concurrence, into the locomotive apparatus. All concurred in stating, they found it impossible to restrain the violence of their movements. From the view I took of those cases, iced water, or cold pump water sweetened, was given in repeated small draughts; cold affusions were directed to the head, and when the circulation was excited, and the skin hot, blood-letting was practised, with cold ablutions to the general surface. The relief from the cold draughts and affusions was immediate. The convulsive efforts became calm, and the patients expressed, in extravagant terms, the agreeable sensations they experienced from them, and the rapid disappearance of their sufferings. The morbid condition of the system, in the cases alluded to, bears a strong analogy to hysteria, as it is occasionally presented to us.

"Having subsequently met with some cases of hysteria, the exciting cause of which was irritation of the stomach, produced by improper food, or other irritants, I was led to repeat the same practice. The result was equally prompt and favourable. In all those cases, however, gastric irritation was well characterized; the epigastrium was highly sensible; sentiment of interior heat excited, and thirst.

"The following case, which came under my care a few days past, illustrates the state of the system, the morbid phenomena I allude to, and the treatment.

"Mrs. W. is about thirty years of age, of short stature, full make, dark complexion. Her husband has been absent on a voyage several weeks, and no intelligence has been received from

him. She lives retired, and uses very little exercise. She had been distressed in mind some days—complained of want of appetite and headache—was constipated. She dined on fresh pork; after dinner took a cold bath, which was prolonged an unusual time; coming out of the bath, she drank iced punch made of old Jamaica rum, and early in the evening took tea. Immediately after this meal, she was seized with spasms of the stomach, vomited, and became much agitated. The spasms in the stomach recurred at intervals of from five to ten minutes; and, during each, there was a tonic spasm of the voluntary muscles, a loss of consciousness of surrounding objects, stifled, suffocated breathing, the eyes watery, and rolled upwards. In the intervals, weeping and great depression of mind. The slightest pressure on the epigastrium gave uneasiness—sensation of heat was experienced in the stomach, and thirst.

"At first I gave her hydrant water, none colder being in the house, sweetened with sugar, to drink. It did not relieve the gastric distress—ice was sent for, and a large piece put in the pitcher of water. She drank small quantities every two minutes. It was highly grateful. A single paroxysm, only, recurred after the iced water was taken. The head was washed with cold water. In a case where the heat of the skin and head was intense, cloths dipped in cold water and affusions were employed.

"I mentioned my practice to our friend Dr. La Roche, who put it in operation in a case of hysteric spasms, that came under his care, after he had tried the usual routine of antispasmodics, and which had failed to give relief. The effect was prompt.

"The pathology of hysteria has been variously given by different writers. The most correct view, and which is deduced from an attentive examination of its phenomena, refers to the cerebral structure for its seat. The brain is a collection of organs of nearly similar composition, which preside over the various intellectual and pathetic faculties, and voluntary motion. The medulla oblongata appears to be the central organ of perception and volition, and its lower portion and the upper part of the spinal marrow, govern the expressions and respiratory muscles. Irritation of the upper portion of the medulla occasions spasms, convulsions, &c., of the voluntary muscles; and of the lower portion, irregular and spasmodic contractions of the muscles of respiration, of the voice, and of the face, as expressing the passions. Hence, the sense of suffocation, sighing, screaming, crying, laughing, weeping, and the various distortions of the countenance.

"Individuals who experience frequent attacks of hysteria, have this portion of the central structure in a permanent state of irritation, of feeble grade, and which is increased by any sudden and strong impression. An unexpected noise, sight, or intelligence, becomes in them an exciting cause of the hysteric paroxysm. Venereal irritation, sufficiently intense to be transmitted to the

brain, is often communicated to its central organ, and excites the symptoms of hysteria. The stomach and uterus are those parts from which this irritation is most commonly transmitted, and is effected through the great sympathetic, which anastomoses with the pneumogastric or par vagum that has its origin in the medulla oblongata.

"The varieties observable in hysteria will depend, 1st, on the intensity and extent of the cerebral irritation; 2dly, on the local visceral irritation, by which it is excited; 3dly, the organ that is the seat of the primary irritation.

"This pathology of hysteria is founded on the symptoms, the disturbances of functions it presents, and the organs that accomplish those functions.

"With respect, yours truly,

"SAMUEL JACKSON.

"*To Dr. Wm. P. Dewees, June* 29, 1826."

Preventing the Recurrence of the Paroxysms.

There are no affections of the other systems of the body so liable to recurrence as those which affect the nervous system. This may be owing either to the difficulty of restoring the nervous tone when impaired, though not subjected to the continued influence of the exciting causes; or to the great difficulty of securing this system sufficiently long against the operation of these causes, that the nerves may recover their ordinary healthy standard.

The difficulty just suggested is particularly great in the disease now treated of, owing to the constant liability of exposure to the exciting causes; for, almost any severe intellectual operation, or any undue exercise of any of the senses, may endanger with relapse the ill-restored nervous system; hence the difficulty and uncertainty of a radical cure of hysteria. Besides, the best concerted plan that can be devised will be too certainly useless, if co-operation fail on the part of the patient. We have already adverted to this difficulty, and it is repeated with a view to lessen an expectation of the efficacy of remedies, so commonly indulged in by patients of this class, without using their efforts to secure their good effects.

To every patient afflicted with hysteria, it should be inculcated that much may be done by a proper and persevering exercise of the moral faculties, and by the judicious employment of their physical powers; and that on these, vastly more depends for a cure, than on the exhibition of medicine; and, farther, that without the healthful play of these powers, medicine alone cannot prevent the return of evil, though it may occasionally alleviate a present misery.

It will be seen at once, that part of this plan must be difficult of execution; since the exciting causes are almost constantly presenting themselves; at least it is so with those of the moral kind; and these seem to require more than human resolution, or human foresight, to either interrupt their operation, or to avoid encountering them. Yet we know much can be done, when reason is properly exercised, or forbearance duly maintained. It should, therefore, always be shown to patients, how much depends upon themselves for a cure, by pointing out the importance of not yielding to sudden impulses, nor indulging in destructive forebodings. By the one the system is thrown into violent and ungovernable agitation; and by the other it is rendered so morbidly sensitive as to be operated on by the slightest causes.

The physical exciting causes may be avoided with more certainty, or their presence more easily removed, than the moral; yet to be successful in preventing their operation, requires much self-denial, and entire conviction of the necessity of the sacrifice.

It would be difficult to point out the causes of the diminution of this disease within the last thirty years, in this city, though the fact is certain, so far at least as we can rely upon our own observations. Have the temperaments most liable to this disease been changed, by either physical or moral causes? Certain it is, that at present we are rarely called upon to attend in an hysterical paroxysm, whereas formerly such calls were frequent. Is this change to be considered a real advantage to the female? It might be doubtful if the observation of Whytt[1] be true; namely, that "however troublesome and obstinate nervous disorders may often be, they have some advantages attending them; for the weak state of the blood and vascular system, in many of these cases, renders such patients much less subject to inflammatory diseases than those of a stronger constitution." Thus it seems, that hysteria, like gout, may ward off severer blows.

The first general indication in the cure of hysteria is to alter that peculiar state of the brain and nervous system, which gives rise to the disease when the exciting causes are applied. This condition may consist in too great a sensibility of the nervous system; or in such changes of their sentient power, as to render them liable to be affected by agents not ordinarily offensive, nor inordinately stimulating, as already explained above. Now could this indication always be fulfilled, we could always cure nervous or hysterical diseases.

We have already remarked that the nerves of almost every part of the body may, from their sympathy with the brain, become affected with this peculiar condition, which gives rise to

[1] Works, p. 631.

hysteria, or at least to nervous symptoms. The intensity of these symptoms will therefore necessarily depend upon the force with which they may sympathize with the brain, or upon their sensibility, or altered condition from health; hence, the same force of cause will produce very different degrees of effect in different individuals. In some, symptoms may be limited to palpitation of the heart, globus hystericus, &c.; while in others it may be followed by a severe hysterical paroxysm.

It will follow, therefore, cæteris paribus, that the greater the mobility of the nervous system, the more difficult will it be to effect a cure; and that the remedies to be employed must be either of great power, or they must be continued longer. The remedies must be addressed to the nervous system, through the medium of the stomach, skin and mind.

These remedies will consist of tonics, antispasmodics, the cold bath, and agreeable impressions on the mind. The tonics will comprise the various bitters, steel, and food. The bitters may be the Peruvian bark, sulphate of quinine, gentian, orange peel, columba root, quassia, &c.: the preparations of iron, may be the carbonate of iron, the sulphate of iron, the muriate of iron, the aromatic tincture of iron, &c. The antispasmodics may be, the castor, asafœtida, valerian, Hoffman's anodyne liquor, ether, &c. The food, all such as is of easy assimilation; as beef, mutton, poultry, venison, &c.

In using the various substances above enumerated, especial care should be taken that they are not exhibited in alcoholic menstrua. Much mischief has been produced by not attending to this injunction. Dr. Whytt recommends even large doses of the bark and brandy to patients labouring under nervous or hysterical affections; and the weight of his character has too certainly perpetuated the practice, both in his own, and in this country; for he particularly extols the efficacy of the tincture of bark, in his own person.

He says, "I have myself taken the above tincture, (the tincture of bark,) in the morning, for eight months together, and with remarkable advantage. For three or four years before, I had been troubled with much wind in my stomach, a giddiness, and sometimes a faintness. I observed in the morning, soon after taking this medicine, a grateful sensation in my stomach, accompanied with better spirits than I had at any time through the day, or than I ever found from drinking wine, even when I used it freely. I have ordered this tincture to many patients, who have taken it for two or three months successively, and after intermitting it for some time have begun again. Most have found benefit, and those most who used it longest," p. 635.

Notwithstanding the respectability of the authority, and the high encomiums bestowed upon this preparation of the bark, we

must and do conscientiously protest against the spirituous form of this or any other of the bitters. We are certain it is not the best under any circumstances in which it is desirable or proper to use these drugs; and when employed in the form of tinctures, and especially to the extent Dr. Whytt recommends, it very often leads to the habitual indulgence of alcohol, in some shape or other. We declare this from repeated and ample observation.

Indeed it may not be amiss, in this place, to protest against the employment of any of the tinctures which require large doses, when it can be avoided; and especially the long continuance of them, as is too frequently done in chronic affections. The vehicle, which is brandy, commonly, or even alcohol itself, usually contains but little of the effective ingredient; and the patient, to obtain this little, is obliged to swallow so much ardent spirit, that no advantage is obtained from it, and is sure to be injured by the excessive use of the vehicle. To females, particularly, medicines in this form should never be exhibited; we have known but too often serious evils to arise from them.

Modern chemistry has most happily discovered the active principle of the Peruvian bark, and it is now exhibited with great advantage in the form of a sulphate or an extract. One grain of either, is supposed, and we think justly, to be equal to at least one drachm of the best bark; therefore, when either of these articles is thought to be eligible, it can be given in pills or in solution. The solution, it must be remarked, is the more active of the two forms, if the sulphate be used. The bark may be given in watery infusion, or decoction, when the sulphate or the extract cannot be commanded, but these should be made fresh every day, and care taken to employ none other than the best.

The other bitters should always be given in infusion or in decoction, not alone for the reasons just assigned, but because the principle on which their virtues depend is, perhaps, less concentrated than that of the bark, and consequently the alcoholic solutions of it would be too feeble for exhibition with the slightest chance of benefit. In using the bitters care should be taken not to continue them too long at a time.

Steel, in one shape or another, has been the preferred tonic from time immemorial; Sydenham employed the filings, and Riverius the sulphate of this substance, while the carbonate is the favourite form of many. The one to which we are the most wedded is the bitter tincture of iron, and is made as follows:—

R. Limat. Ferri, ... ℥j.
Rad. Gentian. cont. . . . ℥ij.
Cort. Aurant. . . . . ℥j.
Suc. e pomis expres. vel Cider, . ℔ij.
M. and macerate three weeks.

Of this, twenty or thirty drops are given in a little sweetened

water, morning, noon and evening, about fifteen or twenty minutes before eating. This medicine agrees admirably with stomachs disposed to be dyspeptic, and labouring under loss of appetite: it may be gradually augmented if necessary. Should it produce a sensation of weight, or as if the stomach were contracting painfully, the dose should be diminished or desisted from. Steel may be continued to almost any necessary period without the slightest injury. It will sometimes disagree with the stomach, but this is a rare occurrence; and when it does, it should be instantly abandoned.

It sometimes purges; when this happens, five drops of laudanum should be added to each dose: at other times it constipates the bowels; this should be obviated by a rhubarb pill taken every night.

Antispasmodics should only be considered as palliatives in the cure of hysteria; but they often become necessary during the attempt to prevent the recurrence of the convulsive or other paroxysms. When the patient is oppressed by flatulency, troubled with globus hystericus, or palpitation of the heart, either of the above named medicines may be advantageously employed, especially the asafœtida, and the Hoffman's liquor. The asafœtida is best in watery solution, or in tincture. If the former be employed, the following formula may be used:—

℞. Gum asafœtid. - - ℥ij.
Aq. fervent. - - ℥iv.
f. sol.

Of this a table-spoonful may be given pro re nata: if the tincture be used, a tea-spoonful in a wineglassful of water may be given and repeated as occasion may require. If the Hoffman be preferred, a small tea-spoonful may be given in an ounce of sweetened water, taking care that the sugar and water is prepared before the liquor is poured out, and that it be drunk immediately after it is mixed. It will be necessary to avoid too near approach to a lighted candle when the Hoffman is preparing. Ether may also be given with advantage, under the same restrictions as the Hoffman; but the latter, generally speaking, is the preferable medicine. The other remedies named as antispasmodics may be administered with advantage when the symptoms are not very severe, but they are decidedly less effective than those just proposed.

A very strict attention should be paid to diet in all nervous or hysterical affections: we are sorry to say, that this part of the curative plan is too much neglected by practitioners. It is supposed that the various articles of diet merit but little consideration because the system is labouring under no very active or acute disease; hence the patient is generally directed to eat any

thing light. This indiscriminate order is almost constantly abused; for the patient, not willing to be restricted, too readily obeys the directions, though certain many of the articles of diet which they are in the habit of taking are not friendly to the stomach, and they all interpret the word "light" in favour of the articles they like.

It should, therefore, be distinctly ordered, that no article which is known to disagree with the stomach or bowels, should be indulged in. Food may disagree in a variety of ways, it may remain a long time before it is digested; it will then occasion eructations, a sense of weight or of pain about the stomach, a palpitation of the heart, headache, constipation, diarrhœa, or vomiting. It may turn acid, giving rise to flatulency, burning in the stomach, pain, regurgitations of the contents of the stomach, oppression, distention of the abdomen, &c. It may simply produce costiveness or provoke diarrhœa: but in whatever manner it may disturb the stomach or bowels, it should be forbidden the patient, and some other articles substituted. As a general rule, certain animal substances will be found best, such as beef, mutton, lamb; poultry, as fowls and turkeys; fish, both scaled and shelled, especially the oyster; wild animals, as the deer, rabbit, partridge, pheasant, grouse, &c. Eggs, also, when soft boiled, are almost always acceptable to the stomach.

Vegetables should not be too freely indulged in, especially cabbage, cucumbers, cauliflower, beans, onions, peas, &c. The best are potatoes, well mashed, after being boiled or roasted; rice, turnip, beet, &c. But in directing either of these, (for no two should be eaten at a time,) reference should always be had to the experience of the patient.

The drinks of such patients should be pure water, or toast and water, as a general rule; it may occasionally be necessary to indulge them with something a little stimulating, as weak brandy and water, or good sherry or Madeira wine; but these only at dinner. Tea and coffee should be forbidden when the stomach is disposed to acidity, and milk or chocolate substituted, where these will agree. Good butter may be taken with advantage oftentimes, but bad should be most sedulously avoided. Hot breads and cakes of every description should be prohibited, and suppers most carefully refrained from.

Costiveness must be carefully guarded against by either diet or medicine, or both, if necessary. The substance best calculated for this purpose, as an article of diet, is the bread made from the unbolted wheat flour: this, if regularly persevered in, by making it the substitute for every other kind of bread, will rarely fail to answer this purpose. And as a medicine for this end, the rhubarb, either alone, or in combination with aloes, will rarely fail. The best form of the latter that we know of is as follows:—

℞. Gum aloes suc. - - - ʒss.
Pulv. Rhæi. - - - ʒj.
Ol. Caryoph. - - - gut. iv.
Sapo. Venet. - - - gr. viij.
Syr. Rhæi. - - - q. s.
M. f. pil. xxx.

One of these taken every night, or every other night, as the necessity may be, will rarely fail to answer the purpose effectually.

The cold bath has justly been looked upon as one of the most efficient remedies of the materia medica, in hysterical and nervous affections; its known power in restoring muscular vigour after debilitating illness, its efficacy in imparting tone to the nervous system, and its acknowledged control over the vascular system, have ever rendered it a popular, as well as a very important remedy, in cases of general and of local debility.

But that it may be productive of its best effects, its use must be regulated by the state of the system, or the condition of certain parts of it. There are few remedies more unequivocally abused than the cold bath, owing to the empirical manner in which it is prescribed: on this account, great caution must be exercised when it is about to be used, that it may not be converted into an evil.

The primary effects of the cold bath are, to produce a sensation, which is familiarly termed a *shock;* the skin becomes pale, and uneven, and hence the term cutis anserina, from its resemblance to the skin of a newly plucked goose. The head experiences a sense of weight; the respiration for a time is suspended, and then becomes quick, and sometimes even laborious: a severe oppression in the chest, as though it were tightly corded, is frequently experienced, which sometimes does not pass off altogether, until the secondary stage, or the stage of reaction, takes place.

The stage of reaction almost always takes place very soon after the fluids have been driven from the surface to the more internal parts; and it is one of the proofs of the usefulness of this remedy and of the propriety of continuing it; for should no reaction follow, this application must be abandoned. On this account, the cold bath must be used with caution, and its effects well ascertained; for its temperature must be carefully regulated by the powers of the system to produce an after glow upon the surface. It would follow from hence, that this remedy may do mischief, if the temperature be neglected, at a time it might have been highly useful, had this important point been duly attended to.

Hot and cold are but relative terms, when applied to the human body; nor will the thermometer always settle the point, where the sensation of the one begins, or where the other ends.

On this account it is always best to determine the propriety of the bath, by the sensation the application of water may produce upon the skin. This will necessarily vary in different individuals, and in the same individual under different circumstances. It will, therefore, always be best to commence with a temperature that shall produce but a very slight *shock*, as it can be gradually reduced, as the capacity of the system to produce reaction increases.

We are told that the Buxton waters, (England,) are at eighty-two degrees; yet they produce a slight but a decided *shock;* therefore it will be well to commence with water at this temperature, and reduce it pro re nata; or as the sensation of cold may be less unpleasant, and the reaction more decided. For if reaction do not take place, no advantage can be derived from cold bathing; and this circumstance very properly forms one of the contra-indications to the use of this remedy.

The cold bath must not be used when there exists any visceral obstruction; or where there is any pulmonary affection or local congestion of the chest.

It may be used daily if judged necessary, when the system reacts promptly; or every other day, if reaction be less decided, or only twice a week, if it be feeble. But we may be always justified in persevering in the use of the cold bath, if reaction takes place even very moderately; since we almost always have it in our power to regulate the force of depression by the temperature of the water. There are two modes of employing this remedy; first, by plunging into the water; or secondly, by the water being showered over the body—the latter is generally the preferable mode: it can be done without exposure, and the temperature of the water accurately ascertained.

The best time to use the bath, where the constitution is pretty vigorous, is early in the morning; if it be less robust, about two or three hours after breakfast.

Some are in the habit of going to bed after using the bath: we cannot think this ever necessary, if the bath agree with the patient; but should the system react with difficulty, or too feebly, it may be useful to employ warmth to the surface in this way. But in cases of this kind, it would be better to abandon the remedy, unless it be certain it was employed at too low a temperature, than to persevere in it, and require artificial means to promote reaction. For we must repeat, that the cold bath can only be useful, where it is followed by a kindly glow upon the surface.

Where the system reacts slowly and feebly, we have seen advantage from drinking a cup of warm chamomile tea; indeed, almost any other warm liquid might be employed upon such occasions, together with moderate exercise, by walking briskly over the floor. But in all such instances, immediate attention should

be paid to the temperature of the water; it should be increased to at least eighty-two degrees; and should this produce so much collapse as to render reaction difficult, or very tardy, we believe it would be best to abandon the remedy altogether; or at least, until such change may take place in the constitution, as will enable it to bear water at this temperature. There are constitutions which never profit by the use of the cold bath; we have seen several such. It does not depend upon the absence of muscular power, or upon visceral derangements; but is, as in many other instances of peculiarity, an idiosyncrasy; the system will not react but after a long time, and then feebly and transitorily; a languor and indisposition to motion is experienced; the spirits remain depressed for many hours together; the lips remain livid; and the whole countenance is pale, shrunken, and distressed. With such peculiarity the cold bath must not be used.

With those whose systems react feebly, or those disposed to take cold upon the continuance of wet applications to any part of the body, the head should always be covered with a cap of oiled silk during the bathing. Care should be taken to dry the body, after coming out of the bath, as soon as possible; and if the body be well rubbed with a coarse towel at this time, it will contribute much to its efficacy, as it will hasten and almost ensure the reaction. Salt may be dissolved in the water with advantage; especially in those whose systems are tardy in reacting, or those who are debilitated, or have any tendency to the lymphatic or scrofulous diathesis.

The mind should if possible be led from the contemplation of the ills of the body; it is the very nature of hysterical and nervous complaints, so to disorder the judgment, that a true estimate cannot be formed of the nature, extent, or the degree of importance, that should attach to any painful or distressing sensation. The idea of danger is almost constantly connected with every feeling of the body: a trifling inconvenience is readily magnified into a serious evil; and such patients will often declare themselves to be dying when little or nothing ails them.

Notwithstanding this palpable error in the estimate of their indisposition, it is not always best to declare how little we think of it. It is the duty of the physician to relieve his patient by the best means in his power; he should, therefore, employ them in such a manner as will produce the best possible effect; and whether they be administered through the medium of the mind, or by the agency of the stomach, it matters not, provided the greatest advantage be procured.

It should not, therefore, be considered disingenuous in the physician, if he apparently yield belief to the statements of his patients, or permit them to indulge, to a certain extent, in their delusion: for, by so doing, he oftentimes obtains an advantage

that could not be gained in any other way; by it he almost always secures the confidence of his patient, and sometimes excites even her gratitude; for it matters not, as regards the feelings and persuasions of the patient, whether the pain or inconvenience under which she labours be purely imaginary, or whether it has a real corporeal existence.

The following case in a male will well illustrate our meaning. In the year 1803, Mr. S. called upon me for advice on his case, which he declared to be an ill-cured venereal affection. He was a married man; and when under the influence of wine, was led to illicit enjoyment. This was his first and only aberration; he condemned himself so severely for this act, that he constantly dwelt with intense solicitude upon the probability that he might have contracted disease. He watched every sensation and appearance of his body, with the most painful anxiety; both of which were so exalted by his imagination, that he fancied he had the venereal disease in its most decided form.

Ashamed to make his situation known to his family physician, he applied to a quack, who confirmed his fears. Mercury was administered, and a profuse salivation excited; but the symptoms he so carefully cherished did not change. He became dissatisfied, and sought another and another quack: each in his turn gave mercury, which so reduced him that he was scarcely able to walk. This discipline continued for about fourteen months; at the end of which time he found his health nearly destroyed, and his little property dissipated, to satisfy the rapacity of these merciless pretenders to medicine.

At this period I was consulted: upon a careful investigation of his history, we were perfectly satisfied that he had never been in the slightest degree injured, and frankly told him so, and that we were satisfied this was the case. He appeared at the moment gratified and happy at our assurance, and went away without a prescription. He, however, returned in a few days, and declared I must be mistaken; for that he was certainly diseased. Finding this notion to be firmly fixed, I thought it best to meet him upon his own terms. I acknowledged him to be diseased, but that his disease was completely under the control of medicine, provided he would strictly adhere to instructions. He was delighted with this declaration, and promised the most faithful compliance with any directions we might give.

I had a box of pills prepared for him, composed of bread, coloured with a little rhubarb, and scented with essential oil of aniseed. One of these was directed to be taken every morning, noon, and night his diet was prescribed, &c. He returned much delighted at the end of a week, declaring that the pills had acted like a charm; that his appetite had returned; it was even voracious; that his strength was improved, and that *all his vene-*

real symptoms were much abated. He now begged to be allowed to increase the doses of the pills: this I peremptorily forbade. He persevered in the plan laid down for him for six weeks, at the end of which time he confessed himself to be perfectly well, and every way capable of attending to his long-neglected business.

Success, in this instance, depended altogether upon yielding in appearance to the perverted judgment of the patient: in the same manner we have often succeeded with hysterical and nervous patients.

It must, however, be remarked, that there are two distinct classes of hysterical and nervous patients. The first must be indulged in their belief, that they are seriously diseased; the other must be convinced, that though they experience many disagreeable feelings, yet they have not a dangerous tendency. It requires some caution, or investigation, to ascertain to which of these classes any individual patient may belong; especially, if we are not previously acquainted with their opinions on the subject of their indisposition. A little address, and some inquiry from friends, will always prevent one class being mistaken for the other. In each, however, the mind must be beguiled into the belief that their malady is susceptible of cure.

Cheerful company, agreeable reading, and change of scene,[1] should be among the auxiliary remedies: they should, however, be so managed in almost all instances, that the patient shall not be sensible they are prescribed for her. A little management will effect this desirable end, without the object being revealed. No impatience should be discovered, while listening to the extended history of a patient's feelings and sufferings; for nothing is gained, in point of time, in attempting to cut it short; and much is lost if she be led to imagine we are regardless of what she says: we have ever found it best to devote sufficient time to learn all they can say at once; for the subsequent visits may then be short, since her whole history has been revealed before. After having attentively heard the detail of symptoms, the patient always becomes anxious for the name of her disease: our answer must depend upon which of the two classes the patient belongs. If she belong to the first, we must beware how we call her complaint hysterical or nervous; if to the second, it often becomes a source

[1] We may effect this in a variety of pleasant manners; riding, walking, and sailing, will offer great resources of this kind; and they should be alternated, or continued, as circumstances may force, or utility suggest. Neither of them should be persevered in so long as to produce either listlessness or fatigue: some judgment will therefore be required to render either profitable; but this must be left, in a great measure, to the attending physician. Gilchrist speaks in high terms of sailing: this mode of exercise is too much neglected in this country, but we trust this will not long remain a reproach, since our steamboats are becoming so numerous, and offer such facilities of conveyance, and such conveniences of regulation, as to tempt the invalid to frequent excursions.

of comfort, that we pronounce it nervous; but explaining distinctly, at the same time, that by nervous you wish to be understood a real affection, but not a dangerous one; for most females are well aware, and willing to allow, that complaints of this kind are not often serious in their terminations, however permanent and inconvenient they may be in their continuance. Patients of the hysterical and nervous class should be kept from gossiping old women, and never be permitted to listen to the dismal accounts of the diseases of others.

For every sensation or symptom belonging to another, is instantly transferred to themselves; and they will have as many diseases in turn, as they have heard described to exist in others.

The many disagreeable sensations connected with hysteria make it desirable that they should be relieved from time to time by applications suited to such symptoms; and, happily for the poor patient, we have the most common, as well as the most distressing of them, under pretty certain control.

These symptoms are, palpitation of the heart; flatulency; globus hystericus; and oppression about the præcordia. All of these sensations are very much under the command of the same remedies; namely the antispasmodics already mentioned, such as the asafœtida, Hoffman's anodyne liquor, ether, valerian, &c. But neither of these should be prescribed at random: it should be carefully ascertained that the system will bear these stimuli before they are given; accordingly, the pulse should be examined; and if the artery does not betray a plethoric condition of the vascular system, they may be advantageously given. But should the patient be plethoric, the loss of a few ounces of blood will almost ensure the success of the remedies just named; or it may even of itself remove the whole of the unpleasant symptoms, as mentioned above.

E
C
B

EXPLANATION OF THE PLATES.

PLATE I.

A very distinct view of Carcinoma Uteri, and the changes which take place in that viscus in consequence of this disease.

A. The carcinomatous tumour seated at the posterior part of the cervix of the uterus.

B. The os uteri much enlarged, which forms one of the principal characters of this disease, especially when the sides of the opening are hard and resisting, A small portion of the vagina is left surrounding the opening.

C. The cavity of the uterus near the cervix.

D. The cavity of the uterus near the fundus.

E. The fundus of the uterus.

The sides of the uterus are kept asunder by two pieces of quill, placed transversely across the preparation.

PLATE II.

A posterior view of the same preparation.

A. Shows a section of the carcinomatous tumour, a part of which only could be exposed in Plate I.

B. The fundus of the uterus.

As the size of this drawing does not exceed the actual size of the preparation, it is obvious that all the parts of the uterus have undergone some degree of enlargement.

B
A

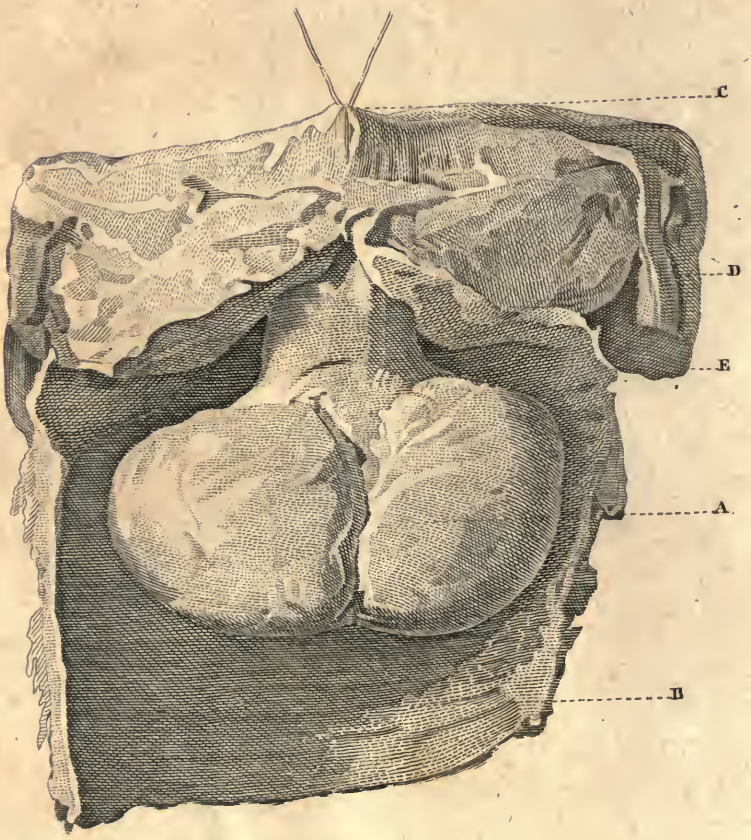
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PLATE III.

This engraving shows a Polypus of the Uterus.

A. The polypus, in which may be perceived a longitudinal depression, made probably by the meatus urinarius. It is attached to the fundus of the uterus by a small neck. The tumour has descended out of the uterus into the vagina, which has been slit open to bring it into view.

B. The vagina; a few rugæ remaining below the tumour. Higher up they are obliterated by the distention of the parts.

C. The fundus of the uterus, by which the preparation is suspended.

D. One of the round ligaments.

E. A part of the left ovarium.

PLATE IV.

Views of the three different species of Polypi, as described by Levret. See Chapter on Polypus.

Fig. 1.

A. The body of the uterus.
B. The pedicle of the polypus.
C.C. The uterus.
D. A portion of the peritoneum.
E. The bladder.
F.F. The ovaries.
G.G. The Fallopian tubes.
H.H. The fringed extremities of the Fallopian tubes.
I.I. Portions of the round ligaments.
K.K. Supporters of the preparation.

Fig. 2.

A. The polypus.
B. The orifice of the uterus.
C. The uterus with its appendages.

Fig. 3.

This figure represents,
1st. The top of the os tincæ.
2d. The vagina opened all its length.
3d. A small polypus arising from a portion of the internal membrane of the uterus.

Examples of the three

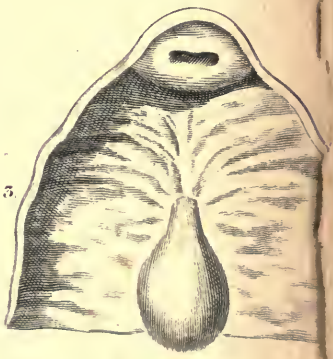


Fig. 3.

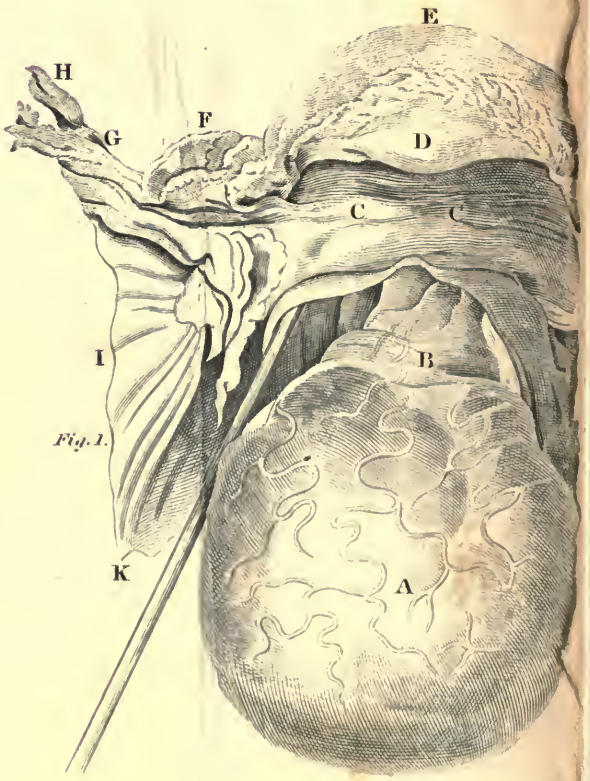
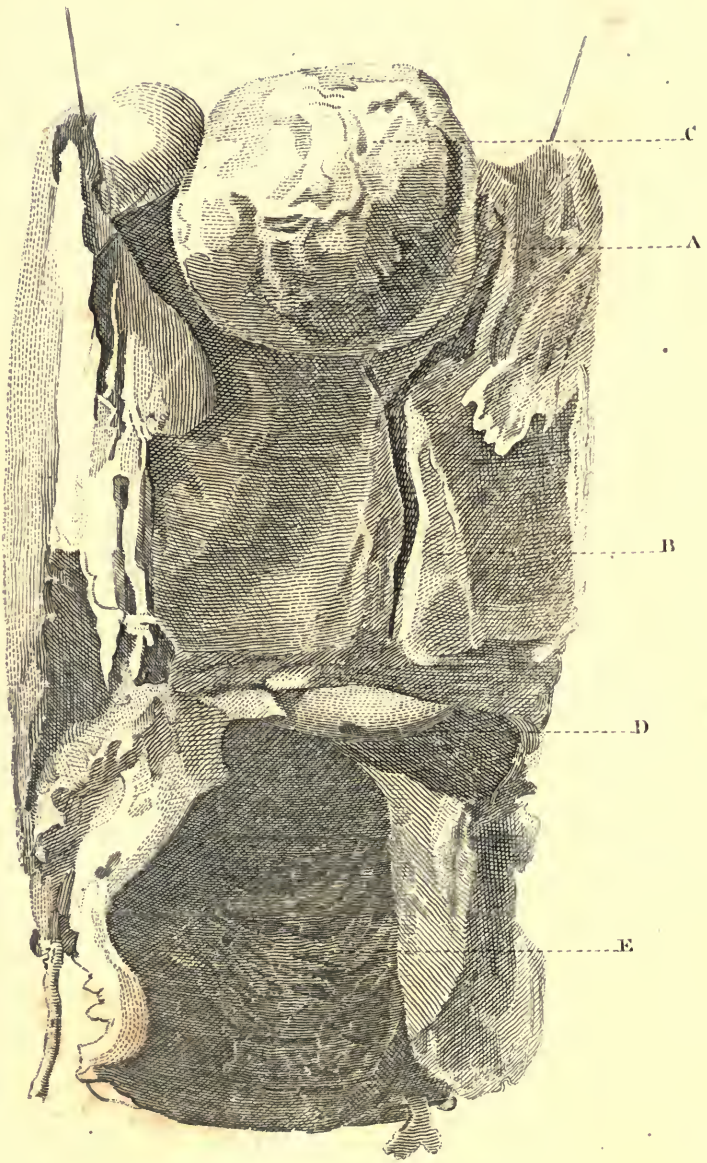


Fig. 1.

Pl. 5



J. Drayton Sc

PLATE V.

Fleshy Tubercle of the Uterus.

A. The edge of the tubercle.

B. An incision made from the fundus of the uterus to the cervix, which shows that the sides of the uterus are not thickened.

C. The surface of the tubercle, having several irregularities upon it.

D. The os uteri, having undergone no change; indeed, its appearance, together with that part of the uterus which projects a little into the vagina, may be looked upon as a specimen of a perfectly healthy os uteri.

E. The vagina slit open; the rugæ, and the very irregular manner in which they are disposed, are also very correctly shown.

PLATE VI.

At the lower part of the plate, there is a rod for passing a ligature round a polypus of the uterus. The handle is made hollow so as to admit a part of the rod, which is secured by a spring in the handle.

At the upper part of the plate is a wire, by means of which the ligature can be drawn through the cannula.

Immediately below this is the cannula, furnished with a shield, to prevent the instrument being pushed into the vagina higher than intended by the operator.

In the centre of the plate is a drawing of a hip-bath, the dimensions being given in inches. On the left side of the plate is described the best form of a female syringe.

PLATE 7.

Eng'd by J. Drayto

PLATE VII.

This plate shows a portion of the hydatids of the uterus. The quantity voided by the patient would have filled a gallon measure. The preparation is suspended in the spirit by a portion of organized coagulating lymph, from which the hydatids spring, being connected with it by means of small filaments of the same substance. The cysts vary in size; some of them contain a fluid, whilst others have collapsed in consequence of its escape.

PLATE VIII.

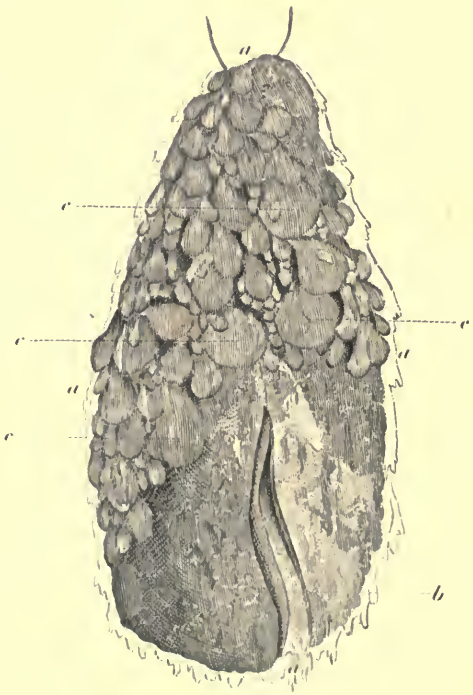
An ovum to which is attached a number of hydatids, and which caused its being cast off from the uterus. See chapter on Hydatids.

a,a,a,a. The size of the ovum, and as large as the original.

b. An incision into its cavity.

c,c,c,c,&c. Hydatids of various sizes, occupying the outside of the ovum.

PLATE 8.



a a a a The size and shape of the Ovum.

J. Brayton Sc.

FIG. I.

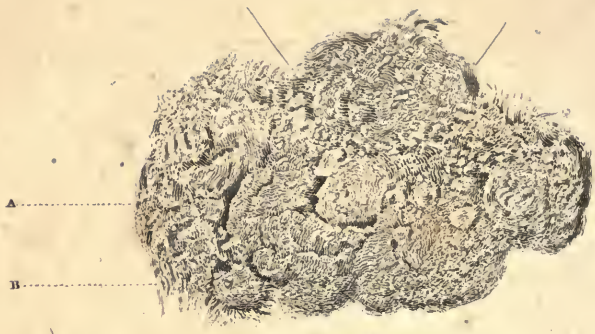


FIG. II.

PLATE IX.

In this plate are two figures of the cauliflower excrescence of the uterus.

Fig. 1. Conveys an exceedingly good idea of the disease, as met with in the living body, the surface being studded with a number of little granules heaped upon each other, forming masses of an irregular shape. The lines drawn from letters A. and B. terminate in different parts of the mass. The letter A. in a portion which has a granulated appearance; the letter B. in a small flocculent portion, which, having lost the blood originally contained in it, forms a fine light substance, which floats in the spirit.

Fig. 2. Shows the uterus of a patient who died of the cauliflower excrescence. The preparation is suspended by the Fallopian tubes.

A. Points to the loose flocculent substance always found after death in patients who have laboured under the disease. During life, the flocculent substances being vascular, are filled with blood, and a solid mass is thereby formed; but these small vessels emptying themselves, nothing remains but their coats, which are seen lightly floating in the spirit in which the preparation is placed.

B. Shows a part of the os uteri, which remains perfectly healthy. Perhaps this part may be about two-fifths of its whole circumference.

C.C. The ovaria.

D. An incision made through the parietes of the uterus, which are somewhat thickened.

PLATE X.

A preparation of the corroding ulcer of the os uteri.

A. Shows the ulceration. A piece of quill is placed so as to bring the whole surface into view. It will be observed, that the os uteri is entirely destroyed by the ulcerative process, but there is not the smallest thickening of the circumjacent parts.

B. Shows the vagina in a healthy state.

C. A small cyst in the broad ligaments containing pus.

C
A
B

PLATE II

Drawn by John Stewart Jr.

PLATE XI.

Ulcerated carcinoma of the uterus.

This plate, when contrasted with the former, shows the uterus altogether much thickened, the cervix of the uterus especially.

Two lines meet at A.; these diverging, lead to the upper and lower, or rather to the anterior and posterior parts of the cervix uteri. All traces of the os uteri are destroyed.

The points particularly deserving of notice in these plates are ulceration without thickening in the corroding ulcer, and ulceration with great thickening in carcinoma.

B. The Fallopian tube.

PLATE XII.

Circular gilt Pessary.

Fig. 1. This plate represents the middle-sized pessary.
From *a*, *a*. Two inches and four-tenths.
b. A central hole to permit any discharge to pass, three-tenths of an inch in width.
c, *c*. An excavation for the neck of the uterus to lie in.

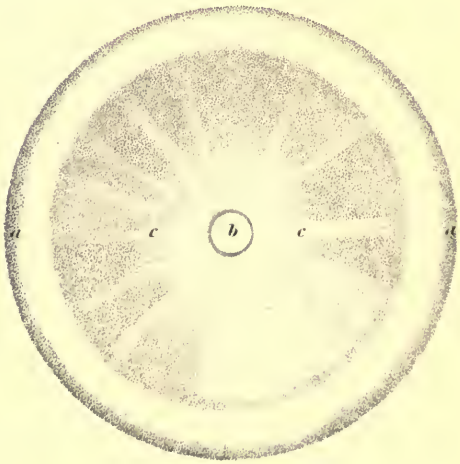
Fig. 2. Is a central section of the pessary.
a, *a*. Represents the internal cavity of the pessary.
b, *b*. Represents the depth of the excavation of *c*, *c*, of *Fig*, 1, five and a half tenths of an inch deep.
c. A section of the central hole, *b*, of *Fig*. 1.

PLATE 12.

Fig. 2.

Section through the Centre.

Fig. 1.



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